FIRE ENGINEERING

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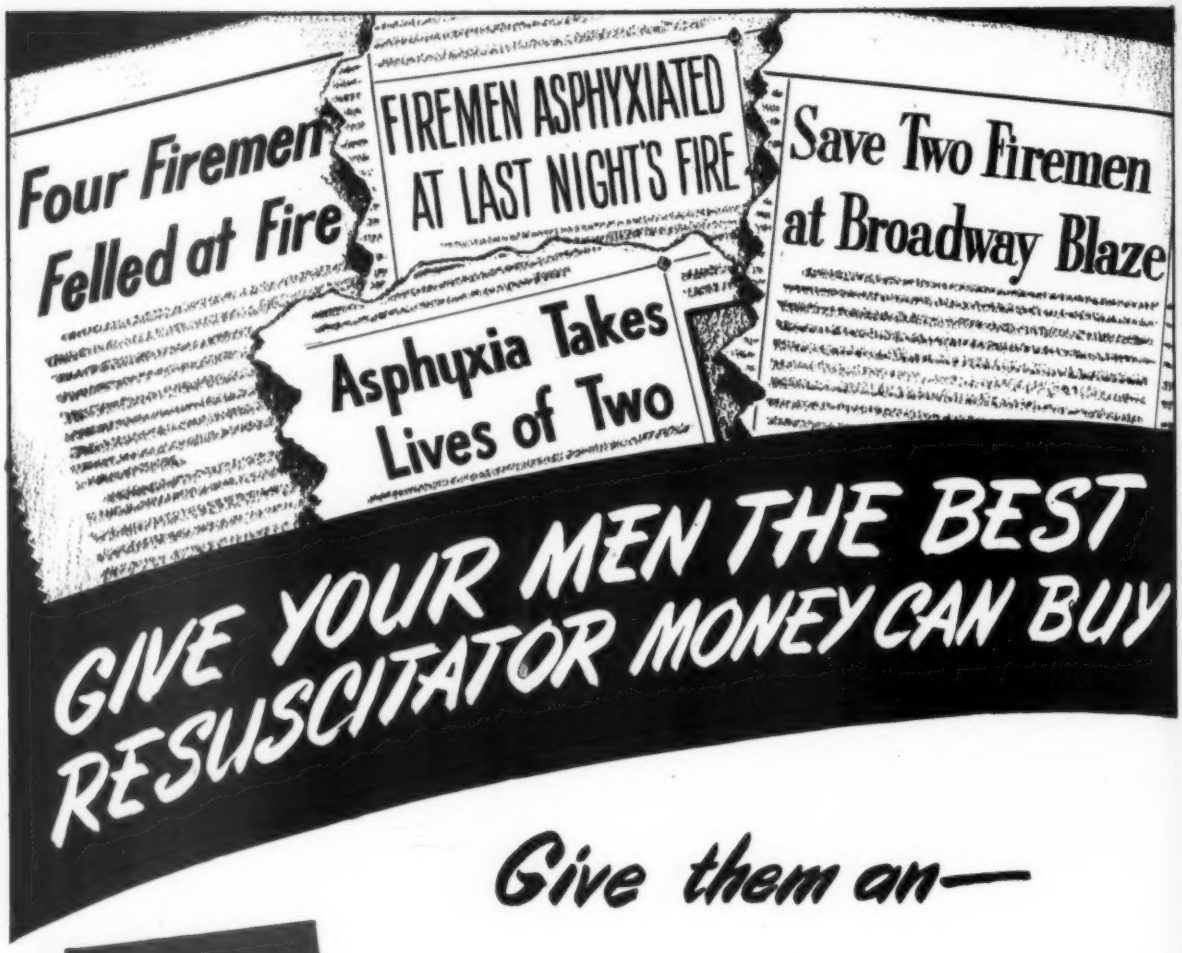
The Journal of the Fire Protection Profession Since 1877

FEBRUARY, 1947

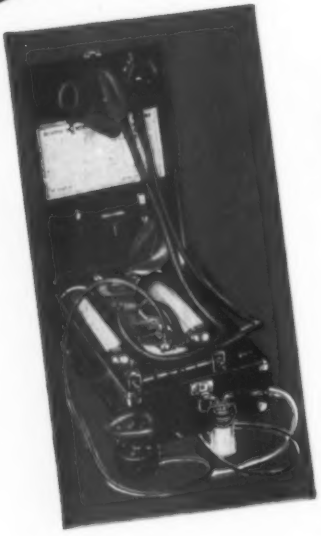
Sudden Burst of Flame from Window, at Recent Providence Fire, Forces a Hasty Retreat

A CAFE SHEPPERD MANN PUBLICATION


Four Firemen Felled at Fire
FIREMEN ASPHYXIATED AT LAST NIGHT'S FIRE
Save Two Firemen at Broadway Blaze
Asphyxia Takes Lives of Two
GIVE YOUR MEN THE BEST RESUSCITATOR MONEY CAN BUY

Give them an—

EMERSON



Every day, firemen themselves are being knocked out by smoke. It can happen to your men anytime, Chief. You'll be mighty glad you bought an Emerson Resuscitator when the time comes to save life from smoke suffocation, electric shock, gas poisoning, drowning or almost any type of asphyxia. After all, the Emerson is being used by firemen, utilities, mining and other industries, as a number one line of defense for all forms of asphyxia or shock. It is comparatively easy to operate and is positive in operation. You can't go wrong with an Emerson. We'll be glad to tell you all about them. Better write today.

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Federal's Propello-Ray Light operates silently, without gears or similar complicated parts. All the moving parts are enclosed in streamlined chrome weatherproof housing to guarantee dependable, reliable service.

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MODEL 67
—an all-purpose siren for heavy duty, characterized by its deep tone

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—a double tone coaster siren that has a full two-minute roll

MODEL C-6
—Federal's most powerful coaster siren, supreme in sound output and coasting

(The siren and light are on separate circuits so that either signal will operate independently)

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

How do YOU Use Fire Engineering?

FIRE ENGINEERING'S timely, factual reporting of the nation's disastrous hotel fires (among other classifications) during 1946 has brought many flattering commendations from its readers high in the fire service.

● Although these expressions of approval are gratifying and encourage our editors to even greater efforts, what we particularly like is the widespread use of this Journal by persons charged with the business of fire control and fire prevention in their communities. To these students of this all-important problem, FIRE ENGINEERING provides the fundamental facts upon which they can (and do) base their requests for the facilities requisite to their calling—and their recommendations for the particular type and make of facility needed.

● All of which is simply another way of saying that in the *editorial* pages of FIRE ENGINEERING they find the facts and figures to enable them to keep abreast of what is happening on the nation's fire front and thereby to accurately gauge their local fire hazards, and their resources for coping with those hazards; and in the *advertising* sections they find the necessary data about the facilities themselves—the apparatus and equipment, so vital in waging the war on fire waste.

● How are you using FIRE ENGINEERING? Are you making fullest use of *all* of it—all the time?

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1947, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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Chief Sorenson's experience is typical. Mack service means even more than supplying the world's finest-built fire apparatus. You also benefit by the follow-through afforded by the skilled personnel of 67 Mack factory branches. That's why you're sure of unequalled fire apparatus performance when you get Macks.

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WISCONSIN
UNDER COUNCIL-MANAGER GOVERNMENT
F. R. BUECHNER, CITY MANAGER

FIRE DEPARTMENT
OLAF SORENSON, CHIEF

October 4th, 1946.

Mr. Pierce J. Fleming, Dist. Mgr.
Mack Manufacturing Corporation
St. Paul, Minnesota.

Dear Mr. Fleming:

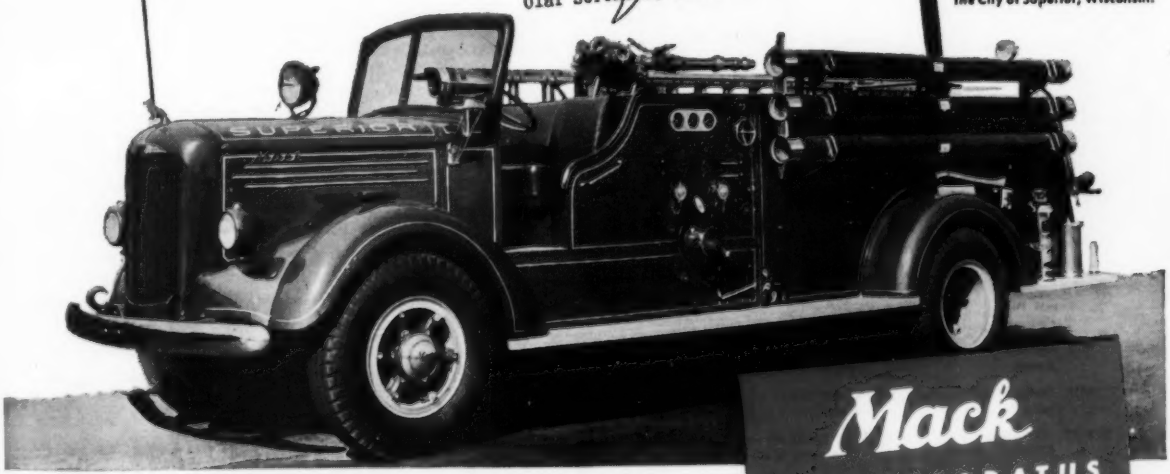
I could not feel otherwise than to write you a word of our deep appreciation for the services rendered this department in advising us on our Mack equipment from both Mr. Robt. Van Dusen and your Mr. Kafski. Mr. Van Dusen, who willingly stayed over to be sure that all of our operators had a full knowledge of the pumping and handling of the Mack, is especially to be commended.

We find that advice is always plentiful and cheap, but it usually comes from unreliable sources and to have two crackerjack men from Mack to give us first hand knowledge is a service invaluable to us. A good many things were talked over between the operators, my mechanics and your men and I feel they are on very safe ground in handling our Macks.

Thanks sincerely,

Olaf Sorenson

Olaf Sorenson, Chief



Mack Type 95, 1000-gallon Pumper recently delivered to the City of Superior, Wisconsin.

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... with an E & J

Portable

RESUSCITATOR INHALATOR & ASPIRATOR

Chief L. B. Shearer, South Sacramento, California, Fire Department members, their truck and equipment, . . . Showing their newly purchased E & J portable Resuscitator, Inhalator and Aspirator.

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In March, 1943, the Tri-District, a group of Fire Department districts in Sacramento County, purchased its first E & J unit. As time went on and accidents of all types occurred with greater frequency, the need for increased life-saving protection became more acute. One piece of this fine equipment was not sufficient. All types of asphyxia, particularly those of drowning, carbon monoxide and electric shock made more evident the advisability of purchasing enough machines to eliminate entirely the risk incurred from lack of sufficient equipment. Now, with the procurement of this latest E & J Portable Resuscitator-Inhalator-Aspirator by the South Sacramento Fire Department, under the able leadership of Chief L. B. Shearer, the Tri-District boasts twelve complete E & J units.

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FREDDIE FIREMAN SAYS:

When the fire is a tough one
And hard to fight
You'll be glad you saved your strength
With the *new* Akr-O-Lite!

The very latest development in hose couplings, nozzles and other equipment. Amazingly light in weight — and absolutely comparable to brass in service use. Easier to handle. An outstanding Akron Brass contribution to greater fire fighting efficiency.

This *new* Akr-O-Lite Rocker Ring Coupling weighs only 2 pounds—4 pounds lighter than brass coupling.

This new nozzle and play pipe assembly—streamlined—completely revolutionary—with new valve design—weighs but 7 pounds as compared to 19 pounds for brass.

Put your department on an increased efficiency basis with Akron's *new* weight-saving Akr-O-Lite Couplings and nozzles. Write for complete information.

AKRON BRASS MFG. COMPANY, INC.
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PROVIDE 3

1 HIGH VELOCITY WaterFOG
2 SOLID STRAIGHT STREAM
3 LOW VELOCITY WaterFOG

1 HIGH VELOCITY WaterFOG

2 SOLID STRAIGHT STREAM

3 LOW VELOCITY WaterFOG from Extension Applicator

For CONTROLLING and EXTINGUISHING FIRES IN ORDINARY COMBUSTIBLES and FLAMMABLE LIQUIDS

Designed to give you the most scientific method of fire protection, Rockwood *triple-action approved* *SG WaterFOG Nozzles provide fast and effective extinguishment on class "A" and flammable liquid fires.

Each Rockwood Nozzle is skillfully engineered so that control or extinguishment of the many different types of fires fought by municipal fire departments and industrial plants is certain.

The SG Nozzle is ideal because its control handle shifts instantly from high velocity WaterFOG to solid straight stream, or by inserting Extension Applicator low velocity WaterFOG.

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Rockwood WaterFOG is approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories.

For further details write for descriptive bulletin . . . 16mm color film showing tests of WaterFOG is available.

* An improvement over the famous war model known as the Rockwood type SG-40 WaterFOG Nozzle. Hundreds of thousands of these were used with spectacular success by the U. S. Navy.

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Specialists in Fire Protection Engineering, Equipment and Installation since 1907.

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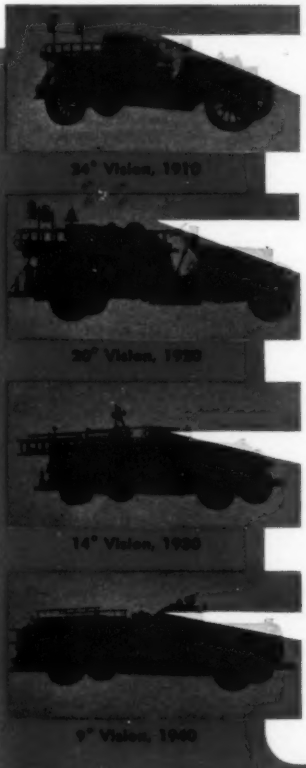

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In the war-time survey you asked for more driver vision in the post-war fire engine to reverse the pre-war trend that was an increasing handicap to the driver. American-LaFrance now provides this improved visibility.

More vision for safer driving in heavy traffic and at street intersections.

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Regular Firemen's Boots Available;

Regular Firemen's Boots are now available. ¾ length. Hundreds in use all over America. See your local Midwestern dealer or write the factory.

MACKINAW COATS ARE MANUFACTURED BY

MIDWESTERN MFG. CO.
MACKINAW, ILLINOIS

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•

Full-powered, 6-cylinder engine designed specifically for fire fighting apparatus — assures dependable pump performance under all conditions. There is no "paper horsepower" in a Ward LaFrance.

•

Two-stage centrifugal pump, easily disassembled in the chassis—an exclusive feature. Fully automatic clutch operation with convenient ground position controls.

•

Exceptional maneuverability is gained by special front axle construction. Variable rear axle ratios to suit local requirements — speed for level country; climbing ability for hilly country.

Why Postpone the Inevitable?

All signs point to the urgent need for replacement of obsolete or war-worn fire fighting equipment. Now is the time to expand fire services to cope with increasing potentials for fire losses. Postponing the inevitable is poor economy—plans for adequate fire service apparatus carried out now will pay future dividends.

Ward LaFrance modern, fire-engineered Triple Combination Pumpers belong in your community's fire fighting service. Check the Famous Features of the Ward LaFrance yourself and you will see why there is such a growing demand for this powerful pumper. Specify Ward LaFrance and be sure of maximum performance and dependability for your fire service. Illustrated bulletins will be sent gratis on request.

WARD LA FRANCE TRUCK DIVISION
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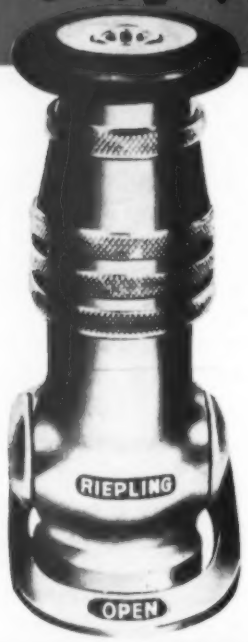
One Nozzle FOR EVERY FIRE



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The Riepling UNIVERSAL NOZZLE

It is five nozzles in one, providing quick stream selection by separate shutoff on either straight stream or fog. It eliminates the necessity of carrying extra nozzles or spray tips.

RIEPLING UNIVERSAL NOZZLES are now used by many Municipal Departments, Industries, Naval Air Stations, Army Air Fields and Coast Guard Vessels.

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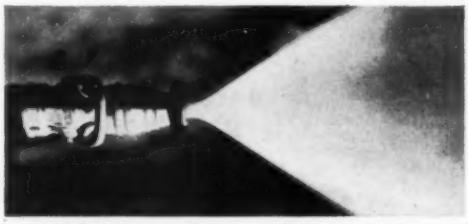
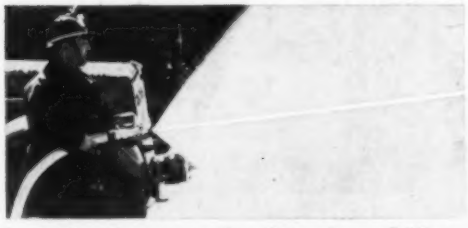


2. A Solid Cone of Fog on low pressure with minimum gallonage.

3. A Water Curtain with maximum visibility and protection.



4. A Simultaneous Combination of Water Curtain with Solid Stream.

5. A High Velocity Water Fog Spray, produced by 30° fog and impinging effect between partially opened main valve streams.

Available for 1", 1½" and 2½" hose. Write for bulletin giving water discharge data and complete description.

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FOUR STREAM SELECTIONS • FOGS ON 90 POUND PRESSURE • USES LESS WATER

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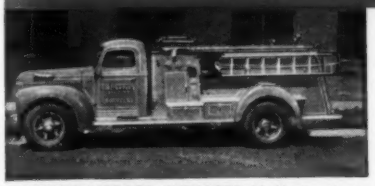

TRI-CITIES AIRPORT, ENDICOTT, N. Y. *Standard FMC Fog Fire Fighter for airport serving Endicott, Binghamton and Johnson City, N. Y.*

SPRINGFIELD, PA. *Standard FMC Fog Fire Fighter delivered to Springfield Fire Dept.*

HALLSTEAD, PA. *Standard FMC Fog Fire Fighter delivered to Hallstead Fire Dept.*

It takes fast action to put out the fire in time to save lives. Fire apparatus must be positive and quick, so that advance can be made right up to the point of rescue without danger to the fireman.

Wartime experience on airplane crash fires proved this kind of quick action is possible with the FMC High-Pressure Fog Fire Fighter. The wartime records of hundreds of FMC units show many lives were saved.

Beyond comparison for saving planes and also invaluable for all other types of airport fires, here's what the FMC Unit provides:

1. **Two high-pressure hose lines, discharging 30 gallons per minute each.**
2. **Gun pressure—650 lbs.**
3. **Pump pressure—850 lbs.**

In airplane fires, FMC Units use high-pressure water fog only, at high velocity, to cut right through to the rescue point. Hundreds of these same units are now serving cities, towns and villages for regular fire fighting. Investigate FMC for *your* department.

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BALTIMORE MUNICIPAL AIRPORT, MD. *Standard FMC Fog Fire Fighter delivered to Baltimore Municipal Airport. Carries its own water supply and complete fire fighting equipment. Provides two guns of 30 gallons each at 650 lbs. nozzle pressure, with pump pressure at 850 lbs.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

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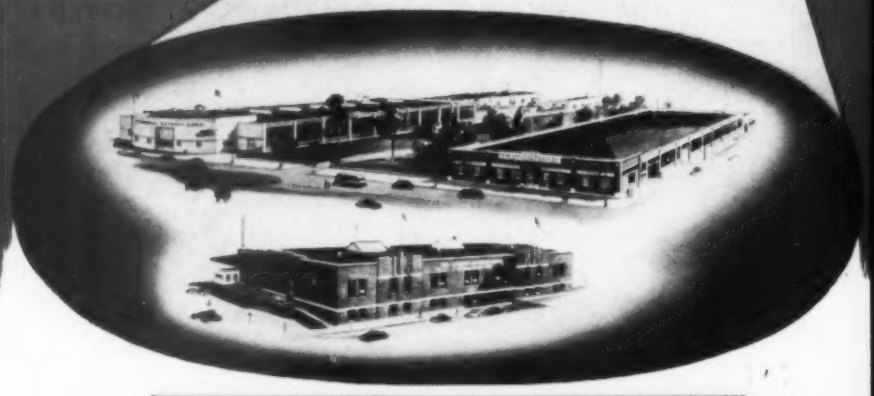
Through its branch offices and distributors in every section of the country, GENERAL serves all American industry. One of these outlets is nearby to provide you with prompt delivery and experienced fire protection counsel. Shown below are the three GENERAL plants in Detroit. Call on your GENERAL representative for dependable fire protection.



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S. O. S. FIRE GUARD Vaporizing Liquid Extinguisher—America's great utility fire fighter. Effective on oil, electrical, grease, and gasoline fires. Will not freeze at 48° below zero. 1 qt. and 1½ qt. sizes.

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CD-SNO FOG Carbon Dioxide Extinguisher. Kills fire instantly, yet cannot damage equipment, premises, or personnel. Effective on electrical, oil, and gasoline fires. Sizes 2 to 100 lbs.

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RED STAR Soda Acid Extinguisher. Releases strong stream of water under chemical pressure. Immediately effective on wood, paper, or textile fires.

IF IT'S GENERAL IT'S DEPENDABLE

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Manufacturers of Fire Extinguishers
Motor Fire Apparatus and Allied Equipment

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Floafome

FLOAFOME Foam Type Extinguisher. Smothers fire under a blanket of foam. 2½ gallon size produces 22 gallons of foam. For use on wood, paper, textile, oil, and gasoline fires.

Protector

ALASKAN and PROTECTOR Pump Type Extinguishers. For wood, paper, or textile fires. Range is 45 feet. Non-freeze charge protects at 48° below zero. ALASKAN—2½ gallons; PROTECTOR—5 gallons.

Pacemaker

PACEMAKER Knapsack Type Extinguisher. Can be strapped on back and operated from that position. Telescopic pump nozzle leaves both hands free for fighting fire. Ideal for outdoor fires.

CUT PROPERTY LOSS

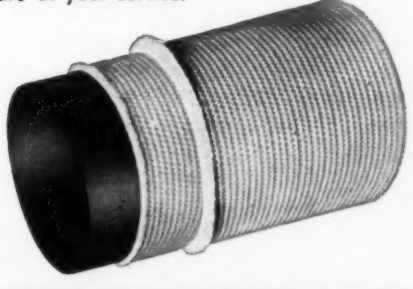
USE BWH FIRE HOSE!

Every minute's delay in fighting fire means greater property loss. That's why flexible, easy-to-handle hose is so important . . . and why so many cities insist on BWH Fire Hose.

Beside being highly flexible, BWH Hose is exceedingly strong. It combines a sturdy rubber tube with a circular-woven cotton jacket . . . the design originated more than 69 years ago by BWH. Today it's still the finest type of equipment available.

High quality fittings for this hose are also manufactured in our own foundry. These fine nozzles, couplings and pipes are an important part of the superior performance delivered by all BWH Fire Hose.

Remember, the name BWH on fire hose is your guarantee of dependability. When your city needs fire hose, consult your nearby BWH agent. His knowledge and experience are at your service.



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Agents in All Principal Cities

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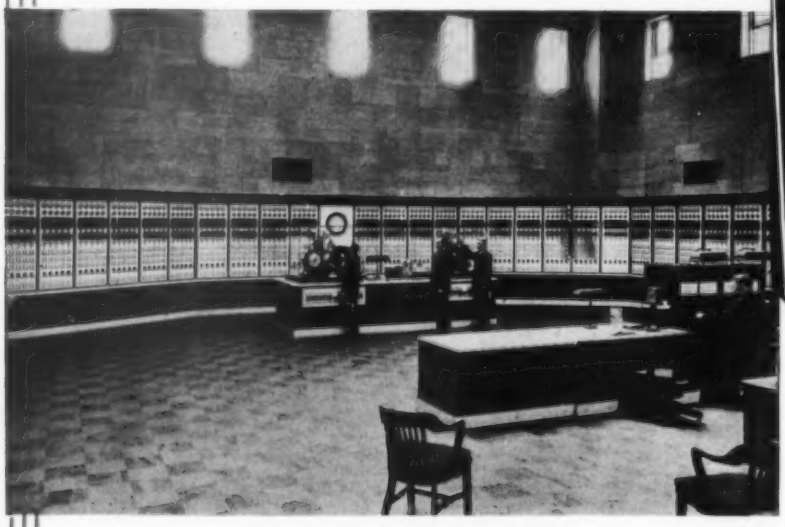
NO ACTION
till box is pulled!



ENCOURAGE THE PROMPT
USE OF
FIRE ALARM BOXES

READY AND WAITING FOR THE ALARM

One of the largest and most efficiently designed fire alarm control rooms in the world with operators constantly on duty to receive and transmit alarms of fire to the fire fighting forces, and a magnificent array of modern fire extinguishing equipment, but — there is no action until an alarm is given and the location of fire determined. Not until then is the fire department energized. The effectiveness of the municipal fire defenses is limited to the adequacy of the means employed for sending alarms.

Inadequate box distribution causes delay, confusion, fire waste and the consequent impairment of national resources. When fires occur, the distance to the nearest fire alarm box is a matter of vital consequence—300 feet in mercantile and manufacturing districts and 500 feet in residential districts are the recognized maximums for safety. The U. S. Chamber of Commerce is responsible for the assertion—*"There is practically no City where there are enough fire alarm boxes!"*

Plans for improvement are in order — we will cooperate freely.

THE GAMEWELL COMPANY
Newton Upper Falls Massachusetts

FIRE ENGINEERING

FEBRUARY, 1947 VOL. 100. NO. 2

With the Editor

More and Better Inspections

Two fires within a few days of each other in New York City, which resulted in the death of two firemen, one an acting deputy chief, and injuries to a dozen others, raise a question for post-war fire officers. That is, what about fire department inspections?

In New York, two aged buildings, one seven and one four stories, partially collapsed during fire fighting operations, burying ten men and officers in one case and four men, including an officer, in another.

That the fatalities were not greater is considered remarkable by those who had occasion to study all factors involved in the fire collapse. That the outcome would have been far more tragic is certain had it not been for the fearless and intelligent rescue efforts of the members of the department who, disdaining the imminence of further collapse, reached and rescued their fellow-firemen, some after hours of feverish effort.

One cannot but praise the courageous efforts of these firemen, who exemplified the noblest traditions of the service. We hope their deeds will not go unrewarded. Yet at the same time, we hope the lessons suggested by these catastrophes that have taken the lives of firemen and citizens, will not go unlearned.

Chief among these lessons is the imperative need for more and better inspections by officers and men of the fire service. Next is the need for more and better fire prevention codes and ordinances with heavy emphasis on giving to the fire department the right not only to enter upon and inspect premises and property at all times, but the power to issue violations and to see that they are corrected.

It must be clear to students of fire prevention and control that members of local fire departments must be continually appraised of the building and occupational hazards in their fire protection districts.

Now that the war is over, there can be no valid reason for failure to provide the fire department with the necessary manpower to conduct such inspections. True, the increase in over-all company personnel has not necessarily meant corresponding increase in tour-manpower, particularly where there are three shifts. And it is further true that many municipal fire departments do not have established fire prevention bureaus, staffed with trained men. Others have bureaus that are largely on paper, comprising insufficient personnel, and some of that ineffective, if not incapable.

Many forethoughtful fire officers believe that not only must there be more company inspectors, but officers of not alone companies, but battalions and divisions, should perform some inspection duty. Not a few go so far as to insist that chief officers know all the important single and multiple hazards of their districts. They claim that it is all very well for the battalion and division commanders to thumb over the inspection reports from their various company units, but they ought to know about conditions firsthand; they should go into huddles with their fellow officers and not only visit such hazards, but map out some operational strategy to cover each serious hazard.

In most cities, including New York, with departments short of full strength, it is frequently impossible to detail on-shift men for outside inspections; furthermore, nearly every company at some time is weakened by absense of men on sick leave, vacation or special detail. Nor is it practicable to ask off-shift men to conduct inspections without some special remuneration or other recognition. Yet if lives of firemen and the public are to be saved and the fire waste reduced, extensive and intensive inspections must be made.

It is well to remember that there has been a con-

siderable change in building occupancy generally, since the war. That change will accelerate. Coupled with this is the fact that fire department personnel has been and is being shifted around; new men are being absorbed in large numbers. In many fire stations almost the entire personnel—officers as well as men—have had little opportunity to gain essential knowledge of structural and occupational hazards in their districts. In short, municipal fire departments today are probably worse off than they have been since 1940 when it comes to having advance knowledge of the fire hazards they must face. face.

No amount of inspections will ever remove all the hazards of fire fighting. But they will turn up bad conditions and violations of safety codes. Not all fire chief officers will be quick to accept the warning of company or other inspectors as to hazardous conditions on the fire ground. But such warnings place directly upon superior officers the responsibility of guarding against such hazards.

Aviation Safety Rules Under Fire

In January, the press and radio sounded off at length on how congressmen, "shocked by the recent flurry of airplane crashes . . . demanded sweeping congressional investigation of national air policy, regulatory agencies and airline companies. . . ."

One radio commentator microphoned that 200 persons have been killed in aircraft crashes during the past few months (including seventy fatalities in China), while many more were injured. "The American people are scared to death (of flying accidents)," intoned Representative L. Mendel Rivers, while Senator Owen Brewster demanded a "nonpartisan probe" into airline safety problems by a Senate commerce subcommittee, and the Civil Aeronautics Board and Civil Aeronautics Administration alternately hurled accusations and denials of responsibility for emergencies at each other.

No doubt this indignation over aircraft accidents is well and good, but we hope it will not, as is so often the case with our government solons, permit interest in and attention on other critical national problems involving loss of life and property to be detoured. We refer, of course, to the nation's fire waste, and particularly, the tragic toll in the field of hotels and other places of public meeting and assembly.

Be Sure of Your Water Wetters

Because of the rapidly growing interest on the part of the fire service in surface tension reducing agents, also called "water wetters" and "wetting agents," it is probable that many new water wetters will be offered for sale to fire departments during the current and following years.

In this connection a word of caution is in order. Chemicals incorporated in some wetting agents are corrosive, and may prove seriously so to booster tanks and other containers of water to which the wetting agent is applied. Further, to check corrosion, where active ingredients are employed in the agents, some manufacturers may use inhibitors. These inhibitors may have a harmful effect upon reactions required in certain types of fire extinguishers in which the treated water is used.

Water wetters of different make may vary widely in rate of penetration; others may have to be used in greater concentration to give effective results.

Thus, as a precautionary measure, fire departments are urged to purchase and use only those brands of wetting agents which have been proven entirely satisfactory for fire fighting use. Avoid the use of new, untried ones.

Fred Sheppard

I. A. F. C. Committee Sets Up Hotel Fire Safety Measures

Report Made at Annual Directors Meeting Advances Sound Suggestions for Reducing Hotel Fire Toll

THE Committee on Fire Prevention and Protection in Hotels, of the International Association of Fire Chiefs, which has been conducting a study on hotel fire safety for the past six months, submitted their recommendations at the annual meeting of the Board of Directors, held in New York City on January 21-23. The Committee includes the following: Chief Peter Steinkellner, Chairman; Chief Frank W. Bender; J. B. Davies and Chief Frank C. McAuliffe.

Their report is printed in full below:

FOR many years the fire chiefs of this country have been cognizant of the possibilities of fires in hotels and the attendant danger to life. With every means at their disposal, they have constantly attempted to lessen this danger to the end that loss of life and property might be reduced. We shall continue to exercise our influence in bringing about this result. Recent tragic fires in hotels have aroused the public, and they have demanded action from municipalities and hotel management to provide reasonable safety measures.

This committee is conscious of the fact that the subject of hotels in general is extremely broad; particularly is this true when it is recognized that all hotels are not the same as to size, construction or location. Some hotels present simple problems. Others, containing hundreds of rooms with large places of public assembly, together with numerous fire hazards, are much more complex. Many are located in communities having little or no fire protection. It must also be recognized that some fire prevention codes classify any structure having five or more guest rooms as hotels. It is the intention of this report to deal more specifically with hotels of four or more stories in height or containing approximately fifty or more rooms, and to base our recommendations on the presumption that such structures are located in cities or towns which have municipal fire departments.

With these thoughts in mind, an attempt has been made to cover the subject in a general way and to present recommendations which will be reasonable from the standpoint of hotel management and still provide a high degree of safety to life and property.

Due to problems of administration, hotel management has views that conflict in many respects with those of fire chiefs and their associates in the field of fire prevention and fire protection. These differences undoubtedly can be adjusted through mutual understanding of the problems involved, and only through such understanding and cooperation can a maximum of safety be devised.

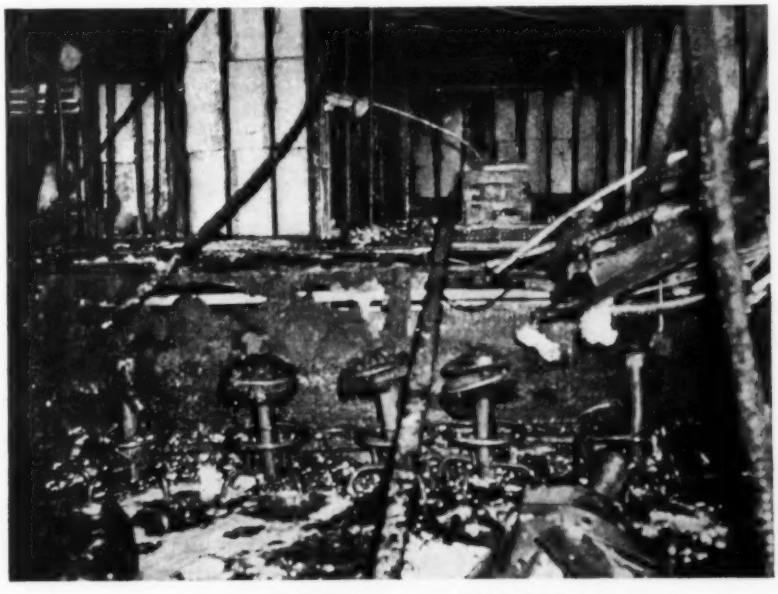
When the public becomes aroused following a disaster, drastic laws and ordinances are often enacted that are ineffective and serve little or no purpose as safety measures and may work an unwarranted hardship on hotel management. A study of hotel fires will disclose the fact that they are the result of a disregard of fire prevention and fire protection principles. We realize that legislation cannot be drawn to protect against failure of the human element, and that the best methods contrived for fire safety can miscarry because of ignorance, lack of cooperation or carelessness of persons involved. We believe that hotel management must realize that safety to their guests is of paramount importance and that the price of such safety is constant vigilance and careful attention to these fire prevention and fire protection principles.

The following recommendations deal particularly with hotels and are not intended to cover laws and ordinances which include all structures and which are parts of all municipal codes. We urge that these recommendations be carefully considered and that they be embodied in principle in any hotel fire safety code that may be contemplated.

Recommendations

1. A. Existing hotel buildings of four or more stories in height containing approximately fifty or more rooms of modern fire resistive construction shall be required to install an approved automatic sprinkler or, when for any reason an automatic sprinkler system is not feasible, an approved automatic fire detection and alarm system shall be provided in such rooms or areas as are occupied and used for such purposes as storage, carpenter shop, mattress renovating shops, upholstery and furniture repair shops, and any other area contributing to hazards within the structure such as display rooms, store basements, attics, rooms with large amounts of wood paneling or combustible construction and concealed spaces and rooms of public assembly having a capacity of fifty or more persons. Where store spaces are rented on the ground or grade level of hotel buildings, and connect directly into hotel lobby, corridor or arcade, they shall be separated by a standard fire division wall, or the entire store, lobby, corridor or arcade area shall be fully protected by automatic sprinklers. When for any reason an automatic sprinkler system is not feasible, an approved automatic fire detection and alarm system shall be provided.

B. Requirements shall include fre-



Wrecked Cocktail Lounge of the Hotel LaSalle

This is the interior of the Silver Bar, a cocktail lounge in the Hotel LaSalle, Chicago, after the early morning fire swept the lower floors. The disaster took the lives of 61 persons and caused injuries to 200.

Ninety-Seven-Year-Old Hotel Burns Down

Once the showplace of Central New York, the Empire Hotel in Syracuse, N. Y., was destroyed by fire. Flames were discovered in a dime store below the hotel, shortly after midnight, and it was 4:00 A.M. before firemen could get the blaze under control. One man was killed and several injured.

quent and regular inspection and test of all above mentioned systems. Proper supervision and maintenance of such protective systems are essential to reliable operation, and it shall be required that this procedure and the assurance of prompt transmission of alarms to the fire department can best be obtained by means of Central Station Supervisory Service wherever it is available.

2. Open stairs or elevator shafts or other vertical openings in existing hotel buildings four or more stories in height containing approximately fifty or more rooms of modern fire resistive construction shall be enclosed with standard enclosures. In lieu thereof, an approved automatic sprinkler or, when for any reason an automatic sprinkler system is not feasible an approved automatic fire detection and alarm system shall be provided as outined in recommendation 1-B, and be installed in all areas except guest rooms.

3. Existing hotel buildings four or more stories in height containing approximately fifty or more rooms not of modern fire resistive construction shall be inspected and requirements made for the installation of a complete approved automatic sprinkler system throughout the entire structure. Requirements shall cover frequent and regular inspection and test of such equipment, and wherever available, connection made to the Central Station of a supervising company.

4. In all hotels regardless of type of construction, unless sprinklered, large areas shall be divided by division walls or partitions with automatic or self-closing fire doors to retard smoke and fire travel. These division walls, partitions and doors to conform with existing requirements for various types of construction. No more than two hundred feet of corridor shall be permitted in any one unprotected area.

5. At least two means of egress shall be provided from all portions of a building by means of standard enclosed stairs or fire escapes, and these exit facilities shall terminate at exterior points. The number and size of these stair and fire escapes to depend upon floor area in accordance with existing laws and ordinances, but in general the distance to any of these means of escape shall not exceed 100 feet travel. Where such interior enclosed stairwells terminate on the inside of the building, that floor and the floors below shall be sprinklered throughout or be provided with a fireproof corridor leading from interior stairway to outside exit or fire escape. All doors and windows which lead to or are in line with exterior fire escapes shall have approved metal frames with wired glass. Signs shall be posted prohibiting parking of automobiles below fire escapes which ruling shall be strictly enforced. Exit to exterior fire escapes shall be direct from hall corridors and not through rooms.

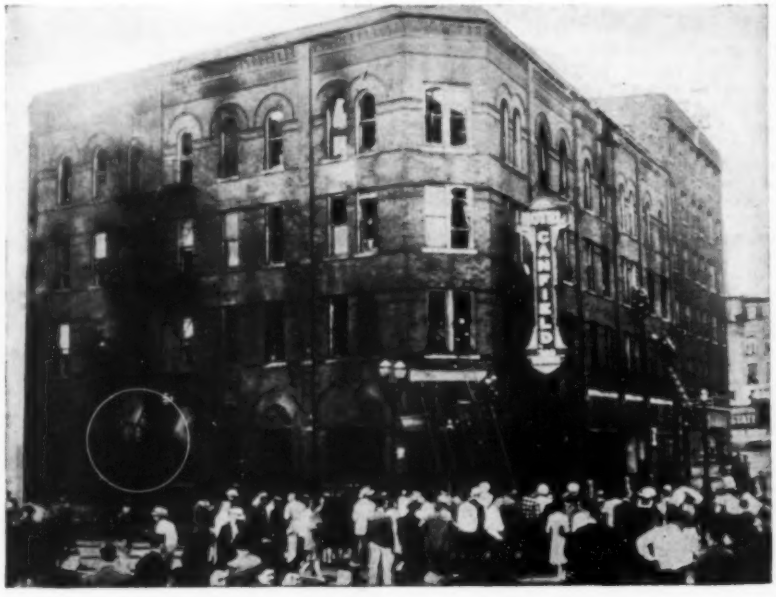
6. All exits shall be marked by illuminated signs and be clearly visible the full length of all corridors. All exit, directional and fire escape signs shall be illuminated by electricity and maintained on a separate circuit.

7. The use of rope and other devices of like nature intended to be used for escape through hotel windows shall not be considered a substitute for suitable and permanent exits of easy access and use.

8. All window openings exposed to adjacent structures of ordinary or frame construction shall be equipped with wired glass in approved metal frames.

9. All hotel buildings having extensive or large air conditioning or ventilating systems shall incorporate into such systems approved types of smoke detection equipment, the operation of which will stop all motors and fans and sound an audible alarm. Where possible, such smoke detection equipment shall also be connected to the Central Station of a supervising company. Where air conditioning or ventilating ducts pass through standard fire division walls or other fire-stop partitions, they shall have metal self-closing dampers equipped with a fusible link arrangement.

10. Existing hotel buildings of four or more stories in height containing approximately fifty or more rooms regardless of type of construction shall be required to install an interior, approved type of manual fire alarm system having a minimum of one box per floor, with an additional box in the hotel office or adjacent to the telephone operator. Such systems shall include an adequate number of suitable alarm sounding devices for fire brigade notification. To secure prompt transmission of an alarm to the fire department, it is recommended that such system be connected to the Central Station of a supervising



Dubuque Hotel Fire Left 19 Dead and 23 Injured

Firemen saved 27 by life net, 35 via ladders when fire struck the 55-year-old Hotel Canfield, Dubuque's second largest hostelry. Circle indicates where flames from lounge enveloped and blocked fire escape, killing one.

company or direct to the municipal fire department.

11. Quarter hour recorded patrol of all occupied hotel buildings is highly desirable and shall be in accord with standard requirements and cover the hours from 8:00 P.M. to 8:00 A.M., or such periods of the night as may be required by the municipal fire department.

12. The installation of a municipal fire alarm box inside or outside of the hotel at a readily accessible point shall be required wherever municipal fire alarm systems are available.

13. The installation of an approved alerting system operated from the hotel switchboard to promptly notify occupants of rooms of the presence of fire shall be required. Alarm systems shall be under the supervision of and tested daily by a responsible person. Where large numbers of people congregate in banquet and meeting halls special consideration must be given to provide an alerting system which will not cause panic or undue confusion.

14. Frequent inspections of hotels shall be made by trained members of municipal fire departments. Fire brigades among the employees shall be organized and regularly drilled with hotel equipment installed for fire fighting and evacuation of guests under the jurisdiction of the municipal fire department. A report of such drills shall be sent to fire department headquarters monthly. Self inspection blanks shall be formulated for the use of the fire brigade, filled in regularly and forwarded to fire department headquarters monthly bearing the signature of the manager or other person responsible for the premises.

15. The practice of investigating reports of fires before calling the municipal fire department shall be immediately discontinued. The switchboard operator shall be required to call the municipal fire department instantly on all reported fires. It shall be mandatory that all hotel codes or ordinances contain a penalty for the deliberate delay in fire alarm transmission by hotel personnel.

16. Decorations shall be flame-proofed and the construction of combustible booths and displays approved by the fire department. The use of guest rooms for the display or storage of combustible materials in large quantities shall be prohibited. Store rooms or work shops shall not be permitted on any floor used for sleeping purposes.

17. Seating capacity in places of public assembly shall be limited to conform with existing laws and ordinances and carry a severe penalty for violations, and capacity placards shall be posted at the principal entrance of such rooms.

18. The use of combustible construction for remodeling in buildings of fire resistive construction shall be prohibited. The use of large amounts of wood paneling in the future construction of fire resistive buildings shall also be prohibited.

19. Fire extinguishers and other portable fire equipment of a type approved for the particular hazard involved shall be provided in sufficient number in accordance with established standards throughout the premises. Standpipes and hose shall be installed and maintained in accordance with standard practice.

20. The use of plain glass in transoms shall be prohibited. Doors and transoms shall be of substantial construction capable of confining fire on either side for period of not less than 45 minutes.

This 40-Year-Old Hotel at Anniston, Ala., Was Gutted by Fire, Causing the Loss of Two Lives

21. Glass skylights and penthouse windows shall be designed to open with fusible links or be equipped with plain glass.

22. Grease chutes venting kitchen ranges shall be safely installed in a standard manner and shall be inspected regularly and kept clean; sprinkler heads or CO^2 shall be provided in canopies and chutes.

23. Brief instructions shall be conspicuously posted in each room informing guests of the procedure to be followed in the event of fire, that transoms be kept closed when they are asleep or away from their rooms, together with explanation of the location of exit facilities.

24. All hotels constructed in the future shall be of fire resistive construction with all stairs, elevator shafts and other vertical openings enclosed with the type of walls and openings commonly considered standard for buildings of fire resistive construction. An approved automatic sprinkler or automatic fire detection and alarm system shall be installed and maintained in accordance with recommendations 1-A and 1-B.

In all other respects future hotel buildings shall conform with the recommendations contained herein.

25. Due to the public hysteria existing at the present time, uninformed persons are offering for sale unsuitable fire protection equipment. Hotel management shall be cautioned to avoid the purchase of gas masks that were manufactured for military or O.C.D. use which afford no protection against carbon monoxide, and also against the purchase of unapproved fire extinguishers, fire alarm or fire detecting systems and other similar equipment. Hotel management shall be advised to consult with their local fire chiefs or Bureaus of Fire Prevention before purchasing above mentioned equipment, and fire chiefs shall be cautioned to recommend that any equipment under consideration be approved by the U. S. Bureau of Mines, Underwriters' Laboratories, or other recognized approving agencies, and suitable for the purpose intended.

26. City or town fire departments shall be provided with the most modern fire fighting equipment and devices for rescue and first aid operations. Fire department officers and firemen shall be constantly on the alert, drilled and trained to act as a unit in disaster emergencies and to perform as efficiently as their manpower and equipment will permit. A plan shall be arranged to co-ordinate the work of fire and police departments together with the Red Cross and other agencies in the event of disaster.

Addendum

For hotels smaller in number of rooms and/or height, the following recommendations are submitted:

A. Existing hotels of two and three stories in height not of modern fire resistive construction and containing not less than twenty nor more than fifty rooms shall be required to have all stairwells and other vertical openings above the basement enclosed by partitions of tile, concrete block or metal or wooden studs with ¾ inch of cement or gypsum plaster on expanded metal on each side, but such openings below the first floor shall be of tile, concrete block or superior construction. Where plaster finish is considered objectionable, wired glass in steel frames may be used on floors above the basement. All such openings shall be provided with approved fire doors. Large areas shall be broken up by substantial fire walls or partitions as described above capable of withstanding fire for the duration of one hour. These areas shall be arranged so that not more than two hundred feet of corridor exist in any one unprotected area. Where store spaces are rented on the ground floor of hotel buildings they shall be separated from the hotel proper by fire walls or fire partitions. In lieu of above recommendations automatic sprinklers shall be provided throughout the premises and properly supervised as outlined in recommendation 1-B, and

(*Continued on page* 125)

Planning The Fire Department Radio System

By D. E. NOBLE*

Editor's Note: The author of the following article, prepared expressly for FIRE ENGINEERING, is one of the best known and qualified authorities to discuss the technical phases of radio communications in the fire service. Dr. Noble has been Chairman of Panel 13 of the Radio Technical Planning Board, which body was organized to study the entire field of radio communications and submit recommendations to the Federal Communications Commission for allocation of frequencies, including those channels for the fire service. Committee Two, of that Board, headed by Herbert A. Friede, Superintendent Fire Alarm Bureau, District of Columbia, which included Chief Roi B. Woolley, assistant editor, FIRE ENGINEERING as the representative of the International Association of Fire Chiefs, presented the case for the fire service and, as announced in previous issues of FIRE ENGINEERING was instrumental in bring about the designation by the FCC of a number of radio channels for exclusive use of the fire service.

Although there is generally nation-wide recognition by the fire service of the many and weighty advantages of short-wave radio in its field, there are some factors of technical and semi-technical nature connected with the procurement and installation of the equipment on which administrative officers of the service are not fully informed. The purpose of Dr. Noble's article is to clarify some of these details.

THE knowledge that much of fire's tragic annual toll of over 10,000 lives and 500 million dollars property damage could be decreased by adequate communication facilities has prompted an increasing number of officials to look toward radio communication as a means of reducing this appalling loss of national life and wealth.

Though much has been written on the uses of radio in fire-fighting operations, i. e., intercepting mobile units en-route, coordinating action at the scene of the fire, etc., there is a dearth of information on the planning of 2-Way Radiotelephone Communication systems.

The prospective user is beset with a number of questions: What frequency to be used? Where to find guidance in the purchase of equipment? What about licenses? Obtaining construction permits and, after construction, how will maintenance be handled?

Three bands have been allocated for Mobile and Emergency Service by the FCC. The first of these bands, 30 to 40 megacycles, has 15 channels allocated to it for fire use. Of the three bands, the 30 to 40 mc. section has the longest "talk out" range, approximately 50 miles.

This band, however, possesses certain characteristics which reduce its usefulness. It is highly crowded, and though this may not present a local interference problem, sky-waves can play hob at distant stations sharing the same frequency. This capricious quality of the 30 to 40 mc. band to permit a signal to "skip" from its confines can cause confusing and often embarrassing directions to issue from a loudspeaker at a station located hundreds of miles away.

Another factor possessed to an unsatisfactory degree in relation to the higher frequencies is this band's tendency to pick up noise. Where operating conditions are already noisy—and what fire isn't!—this characteristic is certainly undesirable.

The use, then, of the 30 to 40 mc. band is chiefly in the capacity of "long" range communication when maximum coverage cannot be obtained through the use of the higher frequencies.

Shorter Range Less Noisy

Less noisy and having a somewhat shorter range is the 72 to 76 megacycle band with its 12 fire channels. Here, the property of the wave is such that skip or sky-wave interference does not appear to the extent shared by the 30 megacycle band. This band has a television channel on each side. Thus, the probability of "cross interference" is not too remote, making this band questionable for wide-scale fire use in those metropolitan areas where television stations are in operation until engineering investigations determine the magnitude of the interference to be expected.

High Frequency for Fire Use

Of the three available bands, there remains the very high frequency band of 152 to 162 megacycles. These very high frequency waves have properties highly advantageous for Municipal and County communications, solidly covering a 15 to 20-mile range with negligible sky-wave interference and a dramatic reduction in noise level.

Recent extensive tests conducted on 162-megacycles over flat Chicago-land and rugged Bedford, Indiana, terrain have fully attested the superiority of this particular frequency. Tall buildings, underground passes, and hills offered little challenge to communications on this frequency.

Perhaps the most dramatic characteristic of the 12-channel, 152 to 162 megacycle band is the startling clarity of speech obtained through its use. Within its reliable range reception is such that all background noise is "washed out" with resulting crisp, intelligible speech. It, therefore, is the preferred frequency for fire use.

There has been much discussion on the allocation of frequencies for the emergency services. The Federal Communication Commission's recent allocation of exclusive fire channels evidenced wise understanding of the vital nature of fire fighting operations.

However, there remains the sharing of frequencies for municipalities of less than 150,000 population. Such sharing with the police department cannot only be awkward but extremely dangerous. It is not outside the realm of probability for two emergencies to occur at the same time.

The simultaneous occurrence of a bank robbery and a theater fire, for instance, poses the problem: who shall be first in the use of the shared frequency, the police or the fire department

Sharing Disadvantages Minimized by Technical Advances

Some of the disadvantages of sharing have been greatly minimized by recent technical advances which permit selective calling. With this system it is possible to dial only the cars desired, the police and fire systems having different dial combinations. This of course does not provide interference immunity should both central stations desire to contact their cars simultaneously. Its principal use lies in selecting the car or cars desired without transmitting information which is unimportant to the rest of the mobile units.

Greatest hope, however, for free fire channels lies in the proposal of the FCC for the elimination of the rule regarding population.

It may be stated here that Mutual Aid will function with greater effectiveness now that the 152 to 162 megacycle band has shown such great promise. This particular band is more or less tailor-made for Mutual Aid, for its fairly well confined service area permits smooth transition from one station area to another without objectionable distant interference.

Equipment Selection

One of the biggest problems confronting the prospective user of 2-Way Radiotelephone is: what make of equipment shall I purchase? Though cost is a decided factor in choosing equipment, the old story of the cheapest being the most expensive can be a true story when maintenance costs are taken into account.

What yardsticks, then, shall the prospective user employ? Company reputation, of course, is important. The shrewd buyer will investigate other emergency communication systems, ask

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questions, and learn much from this "on the spot" appraisal of what the other man is using.

Equipment should meet the Radio Manufacturers Association's proposed minimum equipment standards.

As to receivers, it will be wise to observe such factors as power requirements (automobile battery current drain), sensitivity, image ratio and signal-to-noise ratio, and the selectivity characteristics.

The purchase contract should include provisions for the supervision of installation by the manufacturer, as well as for all tests and adjustments necessary to get the system into proper operation. The ethical manufacturer, of course, will not leave an installation until it is in perfect working condition.

Maintenance

Even though good engineering practice includes the designing of equipment so as to be fool-proof and long-lived, there are times when servicing is required.

Questions the user, "Shall I hire the local radio serviceman, or, must I engage an expert on communication equipment for handling my maintenance work?"

The answer is yes and no! For it is possible that the local serviceman may possess the technical ability to service the communications equipment. More than likely, however, he does not possess this knowledge. The alternative, then, is to employ the services of the department's own engineer, or contract with an outside expert on a retainer basis. Qualified individuals capable of performing this service advertise in certain technical publications.

Preventive maintenance in the form of periodic check-ups of equipment will usually prevent a potential source of trouble from becoming serious enough to cause a breakdown.

The same foresight should be employed in the choice of storage battery and generator capacities. Recommended are storage batteries of ample ampere-hour capacity, as well as generators capable of maintaining a generous current output. Of course, the service department should be outfitted with good battery charging equipment in order to re-charge storage batteries which are subjected to excessive drains.

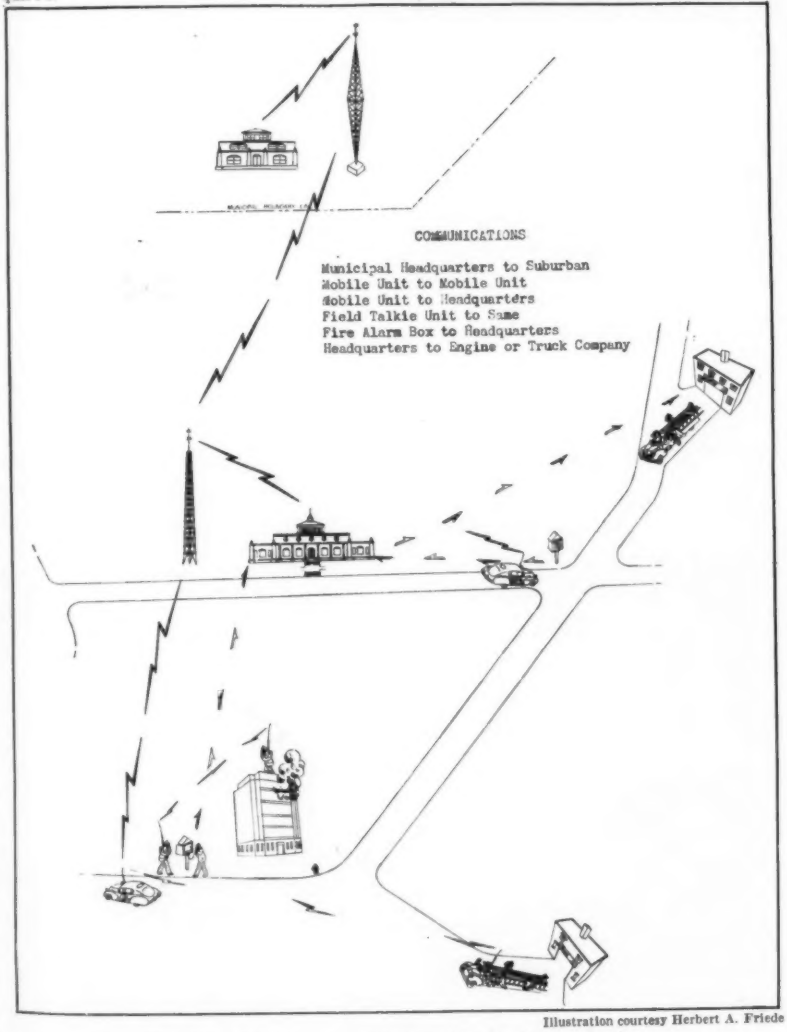

COMMUNICATIONS
Municipal Headquarters to Suburban
Mobile Unit to Mobile Unit
Mobile Unit to Headquarters
Field Talkie Unit to Same
Fire Alarm Box to Headquarters
Headquarters to Engine or Truck Company

Illustration courtesy Herbert A. Friede

Diagram of Modern Fire Department Radio Communications

Layout of modern radio communications system employed by municipal fire department shows how box alarm is transmitted (wire circuit) from burning building (lower left) to fire alarm headquarters (center), thence to fire stations (lower and center right) and mobile units (shown by chiefs' cars and apparatus) and suburban headquarters (top). Note walkie-talkie between street and top of fire building at box (lower left).

Installation Problems

Communication installations for fire-fighting service present problems not found with most of the other emergency services. Equipment must be intelligently selected. Loudspeakers should be located as close to the ear as possible. Earphones and lip microphones should be employed, both of which take into account the roar of fire-fighting operations. However, a handset similar to those used in desk telephones can be used for truck operation.

Water, so essential to fire control, can raise hob with sensitive radio equipment, unless suitable housing and moisture-proof components are used in the system. Incidentally, the acceleration of progress due to war's needs has done much in whipping the moisture problem. Indeed the Motorola "Handy Talky" radiotelephone could be dunked into salt water without impairing performance.

Much has been said about the use of the "Handy Talky" 2-Way Radiotelephone for fire operations. It has already proved invaluable in coordinating aerial fire fighting with ground action. Firemen, high aloft in burning buildings can communicate with the Battalion Chief, receive and give directions that would otherwise necessitate a foot messenger. In the recent Empire State Building tragedy, firemen who were hundreds of feet above the surface were able to coordinate their activities with those below. Time, effort and lives are saved by this "mighty mite" of communications.

However, the "Handy Talky" 2-Way Radiotelephone as used by the Military does not lend itself to the overall flexibility required by firemen. A radio cannot be held in one hand and an extinguisher in another. To circumvent this awkward condition, Motorola engineers are developing new FM equipment which will be worn on the belt of the user. A lip microphone and earphone, as one unit, will permit full freedom of the hands.

Of course, every radio transmitter must be licensed by the Federal Communications Commission. The main station, which is usually capable of 250 watts output may be adjusted by any operator holding a 2nd class license, or higher. A recent ruling by the FCC permits operators of network stations to be unlicensed if they are under the supervision and control of an operator, at the main station, who holds a 2nd class, or higher, license.

Operation itself is the essence of simplicity, amounting to little more than pressing a microphone button and speaking. Aiding simplicity are a series of "10" signals which have been prepared by the Associated Police Communication Officers, Inc., and can be called the "shorthand of speech". Here are a few of those coded figures. 10-4, "O. K."; 10-8, "in service"; 10-20, "What is your location?" Of course, there is no law prohibiting an organization from making up its own code. All that the FCC requires is that speech be kept to a minimum, and that dignity be maintained at all times.

MILLION-DOLLAR PIER FIRE STARTED BY CALCIUM CARBIDE

Spilled Carbide, Coming into Contact With Water, Generates Acetylene Gas Which Becomes Ignited

A FIRE, starting about 5:45 A.M. on the morning of January 8, in Pier 3 of the New York Central's freight terminal, which stretches for a mile along the Hudson River at Weehawk n, N. J., demolished the 1,160-foot, two story wooden structure and 310 carloads of valuable freight including refrigerators, automobile parts, lumber, machinery and foodstuffs, some of it destined for the armed forces abroad.

Marine Fleet Fights Pier Fire
New York and Coast Guard fireboats are aided by large fleet of tugboats in controlling costly Weehawken pier blaze.

Cause of the spectacular blaze was said to be a spilled drum of calcium carbide, which became mixed with water to form highly flammable acetylene gas. The calcium carbide, terminal freight agents report, was being transferred to a lighter from a box car standing on the rail spur running down the middle of Pier 3.

A fifty-pound drum of carbide fell into "the pit", a depression the length of the pier, holding the rail spur. Only a few feet above the river level, the pit doubtless was damp, causing the spilled chemical to form acetylene gas. What ignited the gas is not known; smoking is said to be prohibited on the pier.

First efforts to fight the fire were made by 100 longshoremen, using emergency fire fighting equipment, including hose from a standpipe system on the pier, which was built in 1883. Fifteen freight cars of thirty on the pier, including the car containing the calcium carbide, were rolled to safety as the fire spread, and fifteen lighters and barges were towed to safety by tugs.

Firemen Delayed

Weehawken firemen, who arrived at the ferry terminal (the Weehawken 42nd Street Ferry is located just South of Pier 3) are said to have found their way to the fire blocked by occupied railroad tracks and had to turn around, in a two-and-a-half-mile detour, to approach the burning pier from the north. Further delays were experienced when water pressures in freight yard hydrants dropped, as incoming apparatus connected to the system.

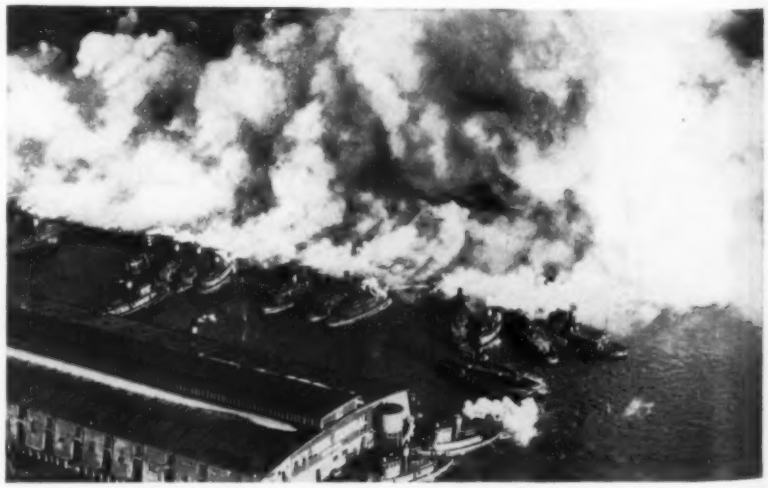
Assistance was asked of New York as quickly as the seriousness of the fire was realized, and the New York Fire Department sent fireboats "James Duane", "John J. Harvey" and "Fire Fighter". Numerous railroad tugs also converged on the blazing pier and exposures in the effort to control the spreading blaze. Because of the intense heat early in the fire, marine fire fighters could not enter the 150-yard-wide slip between Pier 3 and 4 to reach the heart of the blaze. Streams, however, were turned on Pier 2 to the south and this was saved from damage, the firemen being aided somewhat by the prevailing wind. As rapidly as boats could approach blazing Pier 3, streams were directed along its southerly side, and later, the fire was fought from both sides of the wrecked structure. Despite efforts to prevent extension northward toward Pier 4, fire communicated to the creosoted piling of its structure, and firemen fought it from rafts, floats and skiffs. This battle occupied all day and almost all the following night before all danger to this pier was removed.

The fire on Pier 3 was punctuated by explosive puffs of fire as calcium carbide and other chemicals flared up. At times flames rose almost as high as the Palisades, 200 feet above the river, and a towering funnel of smoke arose that was visible for ten miles. On Manhattan, a number of fire alarms were turned in by confused New Yorkers. At times it was feared the old wooden ferry terminal of the New York Central's West Shore Division, a few hundred yards to the south, and a towering grain elevator, containing 521,000 bushels of grain to the north, would catch fire, but these did not become involved.

Ten firemen of the 110 mobilized from Weehawken, West New York, Union City, North Bergen and Gutenberg, all neighboring New Jersey communities, suffered injuries and were treated at North Hudson Hospital. Two railroad workers were also injured and hospitalized. Many other fire fighters received treatment on the fire ground, during the twenty-six hour conflict.

Losses are variously estimated from $2,000,000 to $6,500,000. Pier 3 was insured for $2,900,000 according to railroad representatives, and its contents, mostly designed for export, were said to be valued at $3,000,000.

Fire Chief William F. O'Neill of Weehawken was in charge of the fire fighting operations, assisted by Fire Chief Ernest L. Wevill of the New York Central Railroad. Coast Guard officials sent two fire boats and men,



Windward Exposures Protected — Leeward Piers Threatened
Heavy smoke and flames from burning Pier 3 in Weehawken, N. J., force marine fire fighters to work from windward side.

while railroad workers and locomotives were rushed in to clear the yards in the on-shore path of the flames. All available police and emergency forces were rallied at the scene to aid firemen and control the thousands of spectators who lined the Palisades and tied up traffic for blocks. Radio broadcasts of the progress of the fire brought increased numbers of the curious to jam the river ferries and New Jersey transportation systems.

TWO MORE NEW YORK FIREMEN LOST IN SECOND FIRE-COLLAPSE

New Year's Eve Tragedy Brings Death To a Chief and Firemen; Injures to Scores

THE New Year opened tragically for the New York Fire Department when two fires, involving the collapse of buildings, took the lives of two firemen and caused injuries to many others. The casualties brought to three the number of firemen fatally injured in the chain of almost identical catastrophes, which started with the Knickerbocker ice plant fire shortly before Christmas and resulted in the death of Fireman Frank Moorhead of Engine 93.

On New Year's Eve, fire of undetermined origin in a seven-story loft building at 749 Broadway, between Eighth Street and Astor Place, was practically under control after nearly two hours of firefighting by forces summoned on three alarms, when the weight of Niagaras of water on fire-weakened supports dropped most of the roof which, in turn, carried away most of the floors, injuring more than a score of firefighters and trapping ten officers and men in the ruins.

The building, of uncertain age, measured 40x100 feet and is owned by Sailors' Snug Harbor. It was unsprinklered, of brick and joist construction, and had one straight-run stairway located behind the elevator shaft. Iron-shuttered windows in the rear opened onto a narrow court and passageway, in which was located fire escapes serving this and other adjoining structures.

The basement and ground floor were occupied by a luncheonette and a druggist. Second, third and seventh floors, by a manufacturer of bedspreads; fourth, storage for slippers; fifth, by manufacturer of brushes, and the sixth, by a lamp factory.

Firemen Trapped for Hours

The fire, reported to have originated on the fourth floor, quickly involved the upper floors and roof. The heat was intense in the rear and only the metal shutters prevented early extension across the narrow passageway into several adjoining old-type structures. Firemen working in the confined corridor and court and off the fire escapes, were in imminent danger of being caught by the flames and collapse.

Water tower and turret pipe streams were shot into the Broadway windows from high- and low-pressure water supplies. Meanwhile, firemen carried their lines into the building itself to fight their way up the old-style stairway.

Approximately two hours after the start of the fire, sections of the roof dropped. Immediately after this Acting Dep. Chief Wm. Hogan ordered all hands out of the building and it is reported that, although knowing the risk he ran, he started up the stairway to make certain his warning was received and heeded. The collapse of the floors, taking with them the stairway, trapped the Chief and nine men, causing injuries to many others, some of whom narrowly escaped death.

Fire fighting immediately gave way to rescue. A fourth alarm was struck to provide adidtional forces. A disaster unit from Bellevue Hospital arrived together with doctors, ambulances and nurses from that and St. Vincent's Hospital. Off-duty officers and men responded rapidly and rescue operations went forward at fever heat. Because of the risk of further collapse and danger to rescuers, heavy street streams were shut down. Firemen of every rank burdowed into wreckage while power compressors were called from the Edison Company to aid in breeching the sidewalk and walls of an adjoining building on Broadway.

At one stage there was fear of an explosion from leaking illuminating gas, and Chief Frank Murphy, in charge following the fourth alarm, ordered gas in the whole block shut off to insure safety. Icy footing complicated operations but, despite this fact, firemen swarmed up ladders and onto weakened floor sections to reach all but those buried deep in the debris. Fireman Walsh was removed in a litter by means of ladders down the front of the building. It was ten hours, however, before Fireman Bennett, the last of the firefighters, was extricated.

In order to reach the most seriously injured, buried in the wreckage, it was necessary to breach holes in the east wall of the fire building, and a heavy wall of the adjoining structure. Through these apertures, firemen and rescuers crawled into the ruins to reach victims. Other rescuers made their way into the basement, partially water-filled. Dr. Harry Archer, Deputy Fire Commissioner, and veteran medico of the department, assisted in rescuing an injured man from the basement, and in treating other trapped victims. In his two hours of rescue efforts, Dr. Archer administered hypodermics to several victims and at one time he reached a victim through the breached wall, to administer blood plasma. Dr. Edward Finestone, FDNY, also ministered to victims at considerable personal risk.

Officers who were active in leading the rescue work—some of them volunteering (being off duty at the time) were: Assistant Chief Conway, Deputy Chief William H. Taubert; Battalion Chiefs McPartland, Masset and O'Brien; Acting Battalion Chiefs Irwin (Supervising Engineer) and Jones of the Fire Department Shops and Captain Green of Rescue 1.

Chronology of the Fire

5:27 P. M.—Box 396, Broadway and Eighth. Engine 72—23—25; Ladder 3—20; Rescue 1; Tower 2. Chief Ermentraut, 6th Battalion and Acting Division Chief Hogan, 2nd Division.

5:51 P. M.—Signal 7—5 calling Engine 18, last-due company.

5:57 P. M.—Second alarm. Chief Reynolds, 3rd Battalion; Deputy Chief Cashman, Fire Patrol (who special-called

Two Firemen—One a Chief—Lost in Fire and Collapse

Interior of wrecked New York Broadway loft building where Acting Deputy Chief William Hogan, 2nd Div., and Fireman Winfield Walsh, Ladder 9, lost their lives.

three additional sections for covers); Assistant Chief Donovan, in charge. Fire Chaplain Doyle—E 14—5—20—3—28; L 9; Searchlight 21.

6:05 P. M.—High-pressure service raised to 150 PSI.

6:10 P. M.—Third alarm—E 55—24—16—30—31; L 5; Chief Kirschenheiter, 2nd Battalion; Dr. Finestone; Acting Fire Marshal Scott; Assistant Marshals Reilly, Gribbon, Powers and Bernhart. Fire Commissioner Frank Quayle caught this alarm via radio in lower Manhattan and rolled in.

Photo Bill Herries

Broadway Fire at Its Height

6:31 P. M.—High-pressure service raised to 175 PSI.

7:16 P. M.—Fourth Alarm (following collapse of floors)—E 17—11—7—1—3—9; L (none; sent via telephone by order Commissioner Quayle); Chief O'Brien, 7th Battalion; Fire Chief Frank Murphy; also Chiefs Scanlon and Beeber; Acting Battalion Chiefs Jones and Irwin; Asst. Supervising Engineer Gaw; Dr. Archer, Dr. Nilsen and later, Dr. Kramer.

8:11 P. M.—Special call—Two ladders 11—12.

9:15 P. M.—Special call—Rescue 2.

10:36 P. M.—Special call—Thaw machine.

Locating: 12 pumpers and 4 ladders. Dispatchers relocated E 47 in E 76 and L 18 in L 11.

Total responses: 20 engines, 6 ladders, 2 rescues; 1 water tower, 1 searchlight, 1 fire-department ambulance, 1 fuel tank and 4 patrols (salvage).

Fire-alarm staff: Supervising dispatcher—Cruise; Dispatchers—Kleisch, Sedgwick, Brown, Lauritis and Dinan; Telephone—Joseph Quinn; Press desk—Fireman Vic. Cruise; Radio—Lorraine Lauritis.

Last Operations of Some Companies

Interestingly enough, the fire occurred within a few hours of the time set for the disbandment of several of the companies that were called to the emergency, as part of the department's reorganization plan. Engines 25, 19 and 20 were scheduled to go out of existence at midnight, New Year's Eve, but all were on duty at the fire at the time. Engine 25 returned to its station at 1:47 A. M., and then went out of existence; Engine 19 "signed out" at 8:00 A. M. the morning after the fire, instead of 12.01. Engine 20 was relieved in time to go to Engine 72 (its new quarters) and deposit its apparatus at midnight so that Rescue 1 could take up its new quarters in that house.

The department's field kitchen, manned by members of the Uniformed Firemen's Association and buffs, served coffee to the chilled firemen.

Members of the Salvage Patrol under Deputy Chief Cashman and Captain Pritchard spread 157 salvage covers, of which 90 were reported ruined. The fire department also lost some hose and equipment in the crash.

Fireman Walsh died January 4 and Chief Hogan succumbed shortly after. Both received funeral honors of full chiefs.

Public Radio Broadcasting Unfortunate

The speed and extent of the commercial radio broadcasts of the tragedy brought about unfortunate repercussions. There was much disquietude among families that caught names of reported victims on the air, resulting also in a flood of inquiries to newspaper offices and municipal agencies. The re-broadcasts (recorded) of first-hand rescue operations by network stations also set in motion crowds of New Year's Eve revelers, who converged on the scene, giving the hard-worked police and fire forces further trouble.

Those hospitalized as a result of the crash, in addition to Acting Deputy Chief William Hogan, 2nd Division, and Fireman Winfield Walsh, Ladder 9, were: Captains John T. McGuire, Ladder 5, and George Winters, Ladder 3; Lieutenants Jeremiah Cronin, Ladder 9, John T. Mitchell, Ladder 20, and Joseph Schick, Rescue 1; Firemen James Fisher, Adelbert Lipert, J. J. Poletto, all of Ladder 5; Harry Harriendorf, Aide to Chief Hogan; and Joseph Donahue, Rescue 1.

Four Firemen Buried in Third Building Collapse

New York's third fire-collapse occurred on January 10, and buried four firemen, one a lieutenant. The men were working on the third floor of the four story loft building at 131 John Street, Manhattan, when the floor gave way, precipitating the men amid tons of debris, to the second floor. Three of the men were rescued quickly and removed through windows and down ladders, but the lieutenant, Thomas Rice, of Engine 6, was trapped under beams, machinery and rubble for more than an hour, and seriously injured.

The fire, for which only one alarm and special calls were sounded, was believed to have started at the rear of the third or fourth (top) floors from an undetermined cause. The alarm was received by the fire department telegraph bureau at 2:12 A.M., bringing Engines 32-10-6-12; Ladders 15-10; Chief of the 1st Division and 1st and 2nd Battalions, and Water Tower 1. Special calls later brought Rescue 1, Searchlight 1 and Ladder 1, and the Fire Department ambulance.

Although the cause of the collapse has not been determined, it was attributed to the weight of water thrown into the upper stories to control the fire. The building, of four stories and basement, old style brick and wood construction, was occupied on the ground floor by a restaurant, second and third floors by the Star Cabinet and Carpentry Co., and the fourth floor by the Preferred Die Casting Co.

Those injured were: Lieut. Thomas Rice, Eng. 6, second degree burns of face, hands and legs, and shock; Paul Miller, Eng. 6, back injury, smoke inhalation and exposure; Edward Duggan, Eng. 32, shock and possible fractures of left leg and pelvis; and Gustave Johnson, Eng. 32, shock, exposure and bruises. All were hospitalized.

As in the case of the New Year's Eve fire and collapse, fire extinguishing operations had to be curtailed in order not to drown men in the wreckage. Doctors and ambulances were quickly on the scene and firemen, aided by employees of the New York Steam Company, across the street from the fire, and Police, concentrated on removing the trapped victims. Dr. Harry Archer, First Deputy Fire Commissioner, was foremost in the van of rescuers. Fire Commissioner Frank Quayle and Chief of Staff of the Fire Department Frank Murphy, and Assistant Chief Martin Carrig took personal charge of operations, assisted by members of the Bureau of Combustibles, Building Department and other municipal agencies.

The fire ate its way through the upper part of the ancient structure leaving a heavy pall of smoke over the financial area, while firemen fought it from front and rear fire escapes, ladders, and adjoining buildings. It was brought under control by 4:00 A.M. The loss was not disclosed.

British to Conduct Fire Research

The British Government, through the Department of Scientific and Industrial Research, has decided to establish a comprehensive fire research organization jointly with the Fire Offices Committee.

A Fire Research Board has been appointed, with Lord Falmouth head of Fire Research "F" Division and formerly Ministry of Home Security, as chairman. Members of the Board will serve in their personal capacity and not as representatives of any organization to which they may happen to belong.

The Fire Research Organization is something entirely new in relations between Government and industry. It is a joint organization in which industry and the Government are partnered. The cost is shared equally between them.

A fire research station will be jointly established. The capital cost is likely to be between £75,000 and £100,000 and the ultimate annual running cost up to £50,000.

The following are the broad subjects on which research will have to be undertaken:—(1) Research on fire prevention; (2) research on fire fighting; and (3) research on fire protection of buildings, fire-resisting properties of building materials, and elements of structures, safety of life in fires, means of escape, and the prevention of the spread of fire within buildings and from building to building; (4) research on other fire hazards—ships, aircraft, and special industry hazards.

Universal Trade Press Syndicate

MINNEAPOLIS ELEVATOR FIRES CAUSE RECORD LOSS FOR YEAR

Fire Jinx Pursues City, Giving Fire Forces Toughest Trial in Years

A Staff Report

TWO elevator fires within ten days of each other, in Minneapolis, gave the city's fire department under Chief George Lockhart the toughest struggle it has had in years, and pyramided the city's fire loss figures to record heights.

The first fire broke out shortly after midnight, December 19, 1946, in the 50-year-old, two-block-long, 80-foot high Union Elevator in the southeastern section of the city. The fire rapidly enveloped the huge wooden and sheet metal structure, which was reported filled almost to capacity with 3,000,000 bushels of barley, said to have been worth more than $3,000,000 at current prices.

Flames, which at times shot more than 150 feet into the air, were seen by airplane pilots from Fargo, N. D., 250 miles to the northwest of Minneapolis. Firemen, summoned on a general alarm, were handicapped by the intense heat, of the burning elevator and the nine above zero temperature, together with the fact that shortage of hydrants necessitated long hose stretches and the use of nearly all available hose and pumping units. Firemen from neighboring St. Paul were called upon to man Minneapolis fire stations during the emergency. Although the fire was brought under control after four hours of strenuous effort, the ruins and grain smoldered for days, necessitating lengthy supervision and overhauling. At one time during the near-conflagration, grass fires were started half a mile distant from the main blaze, necessitating the diversion of some fire fighting forces to protect exposures. Although the ancient elevator was a total loss, firemen were able to prevent the extension of the flames to other nearby structures.

No firemen were seriously injured, although many suffered from the severe weather. Adjusters, fire marshals and insurance companies instituted investigations into the cause of the fire, said to have started in an elevator leg, and to determine whether or not there was negligence on the part of the employees. Insurance underwriters estimated the loss at approximately $2,500,000.

Firemen Handicapped in Fighting Costly Minneapolis Elevator Fire

Bad weather, inaccessible location, inadequate water supplies (public and private) and failure of plant's sprinkler pump contributed to fire that destroyed Froedert Grain & Malting Co.'s elevator, December 19.

Second Blaze Even Worse

On Saturday, December 28, Elevator C of the Brooks Elevator Corp., in the heart of the Minneapolis milling district, was destroyed, with estimated loss of between $2,000,000 and $2,500,000, giving the city's fire forces, still tired from the Union elevator and other multiple alarm fires, a further ordeal.

The fire was discovered by a grain shoveler, inside the elevator, who saw sparks above, in a leg used to elevate grain from the bottom to the top of the structure. Reports indicate the fire started from friction caused by a slipping belt. The workman, with other employees, rushed to safety a few seconds before an explosion ripped the huge 67-year-old wood and sheet metal structure, sending flames high above the roof, which, towered as high as an eight-story building. The elevator was filled at the time to its 1,000,000 bushel capacity. It occupied the site of the old Empire elevator, which also burned in the 90's with the loss of one fireman killed. Sam Lockhart, father of the present Chief, George Lockhart, fought that earlier fire and escaped injury.

Firemen mobilized by four alarms, struggled in the cold, to prevent extension of the blaze to mills and warehouses in the district as sparks from the fire were carried into the area. Firemen were forced to wet down nearby exposures, including the warehouse of the Goodwill Industries, the Frasier-Riach

Second Minneapolis Elevator Fire Threatens Exposures

Burning of Brooks Elevator Corporation's 67-year-old unsprinklered one-block-square elevator, December 28, periled property over wide area, caused loss of approximately $2,000,000.

Electric Co., the Milwaukee Railroad viaduct, and the A. Y. McDonald Mfg. Co. plant. Turret and ladder pipes, throwing heavy streams, were used in these operations, but the heat was so intense it was impossible for any person

Area Involved by Second Minneapolis Fire

to approach within hand-line range of the blazing structure.

Off-duty firemen were called in to man spare apparatus and cover the empty fire stations.

Radio Proves Its Value

The Fire Department's new two-way radio station KCNX proved its value in these fires, in co-ordinating operations of the fire fighters. Chiefs were able to make speedier calls for additional men and equipment, and better direct the disposition of forces both on the fire ground, and throughout the balance of the city.

National Fire Prevention Conference Planned

President Truman in a move to "bring the ever-present danger from fire home to all our people" will convene a national conference on fire prevention here within the next few months, the White House announced on Jan. 3.

"I can think of no more fitting memorial to those who died needlessly this year in the La Salle Hotel fire in Chicago, the appalling disaster at the Winecoff Hotel in Atlanta and the more recent New York tenement holocaust than that we should dedicate ourselves anew to ceaseless war upon the fire menace," the President stated.

Maj. Gen. Philip B. Fleming, Federal Works Administrator and Director of the Office of Temporary Controls, was named chairman of the forthcoming conference. General Fleming served in a similar capacity during the President's conference on highway safety last May.

The White House statement said that one of the purposes of the fire-prevention conference on fire prevention here tional methods of intensifying the work of fire prevention in every town and city in the nation.

The statement pointed out that fire damage to property in this country during the past decade has been rising steadily year by year and that in this period an average of 10,000 persons have been burned to death or have died of burns annually.

In the first nine months of 1946, it continued, fire losses have totaled nearly $500,000,000, and it is expected the annual total will make last year the "most disastrous in our history" with respect to fire damage.

"This terrible destruction of lives and property," the White House stated, "could have been almost entirely averted if proper precautions had been taken in time. Destructive fires are due either to carelessness or to ignorance of the proper methods of prevention. Those techniques have been tested, but they must be much more intensively applied in every State and local community in the country."

The statement cited the beneficial effects of the highway safety conference in the prevention of traffic accidents and added that Mr. Truman "is encouraged to hope, therefore, that a similar attack on fire losses will yield corresponding benefits."

ELABORATE WATER FOG SYSTEM PROTECTS BUTADIENE PLANT

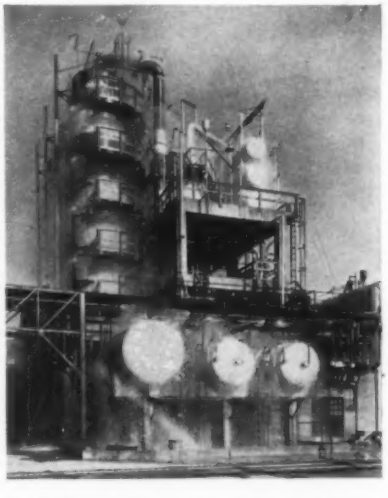
All Units Provided with Fog Coverage at Goodyear Installation

NEW equipment, designed for handling volatile butadiene gas used in manufacture of synthetic rubber and including the latest type of automatic fire-protection devices, was recently installed at the Goodyear-operated Rubber Reserve plant at Akron, Ohio.

Only installation of its type in the world, this system cost approximately a half-million dollars, and was developed over a long period of careful research. Collaborating upon the project were the Automatic Sprinkler Company of America, Goodyear technicians (including fire chief and plant safety heads), the National Board of Fire Underwriters and the Factory Insurance Association, with the entire program financed by the Rubber Reserve.

As a part of testing facilities for the project, an elaborate proving grounds was established at Baytown, Texas, which furnished valuable data taken from a lengthy series of butadiene tests held there.

Not only designed for immediate reaction against any threat or actual outbreak of fire, this equipment will also detect and give warning of escaping butadiene. Given top rating by some of the nation's leading authorities on control and prevention of industrial fires, the new method of safeguarding butadiene is believed the last word in minimizing fire hazards ordinarily associated with this gas.



Stripping column used to purify styrene gas used in manufacture of synthetic rubber at Goodyear-operated Rubber Reserve Corporation plant in Akron, Ohio. Water fog system surrounding the column is shown in operation.

Two important factors feature the greater degree of safety provided in this system. One is that all butadiene used at the Rubber Reserve unit is stored and circulated under water, thereby eliminating much of the fire hazard. Received at the plant in liquid form, the butadiene is circulated in pipe lines through a series of canals and large storage reservoirs extending over nearly three acres.

Other outstanding highlight is the fire equipment itself, which consists of a completely automatic water fog system, highly sensitive to heat. Water fog units comprise a multitude of special orifices extending throughout the entire area of butadiene processing, and these are particularly concentrated around each reservoir where the gas is stored.

These water fog orifices extend through 15 individual units, electrically synchronized so that they will operate either simultaneously, or in series. The units in turn are operated by centrally located valves which are automatic, and which can be manually controlled. These valves are dependent upon a connected air line with an air pressure maintained at one pound.

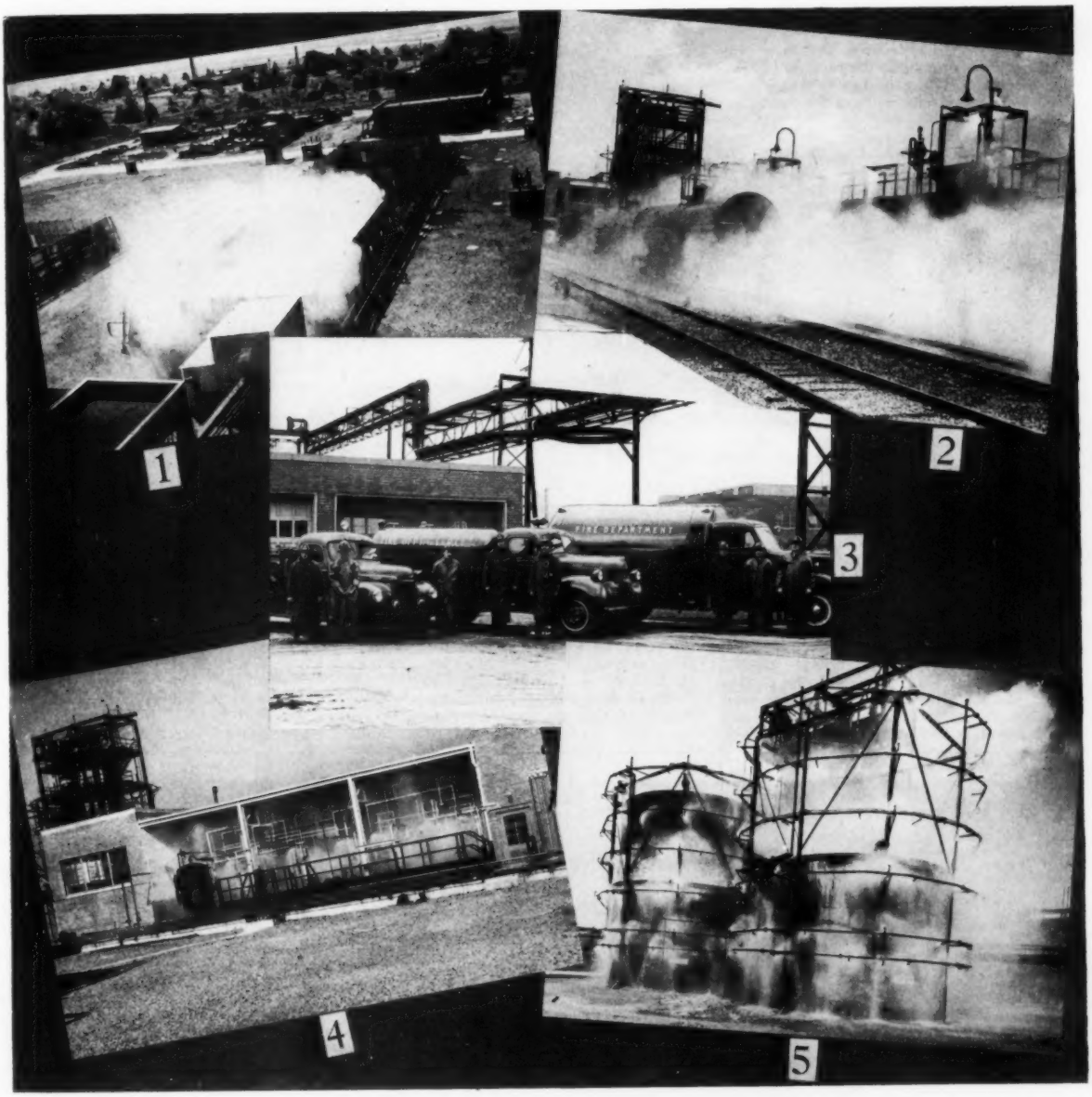
In conjunction with the air line, heat actuator devices are placed at frequent locations, with the actuators designed to react instantly to any increase in temperature. Pressure of fire, therefore, would affect the heat actuators and raise the air pressure, resulting in the expansion of air in the line. This expansion reflects upon the control valve, so that the latter releases water fog units surrounding the fire, and water comes on within five-tenths seconds of the time warning is given of increased heat.

Rated capacity of water output of this system is 5,000 gallons per minute.

Operating in connection with the water fog units is a Mine Safety Combustible Gas Detecting Unit, also fully automatic. This appliance is designed to carry on a constant sampling of air, as it analyzes for concentrations of butadiene which might be present as a result of possible leaks in process lines.

Any concentration of this gas above

(*Continued on page* 126)



Butadiene Fire Control Set-Up Entails Elaborate Fog Production System

1. Submerged storage tank containing butadiene used in making synthetic rubber is protected by water fog system shown in picture at Goodyear-operated plant in Akron, Ohio. In background are engineers observing water fog tests.

2. Butadiene shipment in tank cars reaches Akron Rubber Reserve plant. Butadiene is transferred to loading racks (shown in picture by means of pumps, then to underwater storage tanks. Water fog is used to envelope the operation.

3. Several units of Goodyear's motorized fire equipment is stationed at the company-operated Rubber Reserve unit in Akron, Ohio. Shown from left is general utility fire truck; special truck equipped with 500-gallon pumper, 1,000 feet of hose, portable flood-lighting unit and other fire fighting equipment. Third vehicle is a three-ton (Cardox) carbon-dioxide gas crash truck. It is equipped with a 1,000-gallon pumper and 1,000 feet of hose. Standing by front wheel is Goodyear's Fire Chief, Joe Shifflet.

4. Pump house (open type) where butadiene is transferred from underwater storage tanks and enters manufacturing process for production of synthetic rubber. Water fog system surrounding this equipment is in operation.

5. These storage tanks contain butadiene in gaseous form at Goodyear-operated Rubber Reserve plant in Akron, Ohio. Gas in tanks is controlled by water above gas level with weight-operated gas holder forming pressure against the butadiene. Added safety measure is installation of numerous water fog heads shown blanketing the tanks.

Good Stop Made at Elevator Fire

Country grain elevator fires are difficult to combat and almost invariably result in total loss to building and contents. For this reason, the following account of the joint operations of the Hunterstown Volunteer and the Fort Wayne, Ind., Fire Departments to control and extinguish a severe fire in the Huntertown Grain and Lumber Company's elevator and mill, Huntertown, Ind., is of more than passing interest.

Left: Fire at Its Height. Right: After It Had Been Extinguished

At about 6:00 P.M., July 3, 1946, smoke was observed escaping from three widely separated points around cupola windows and eaves of the cupola roof of the mill. The mill manager and last employee had closed windows and doors and locked up, after pulling the master power switch at about 5:15 P.M.

The alarm was telephoned by a nearby neighbor and sounded on the town's automatic alarm siren at 6:01 P.M., the Huntertown Volunteer Fire Department responding with one 350 GPM pump and one 500 GPM pump and eighteen men. Within ten minutes fifteen more of the company's men were working at the fire. Fort Wayne received a mutual aid call for one pump at 6:03 P.M.

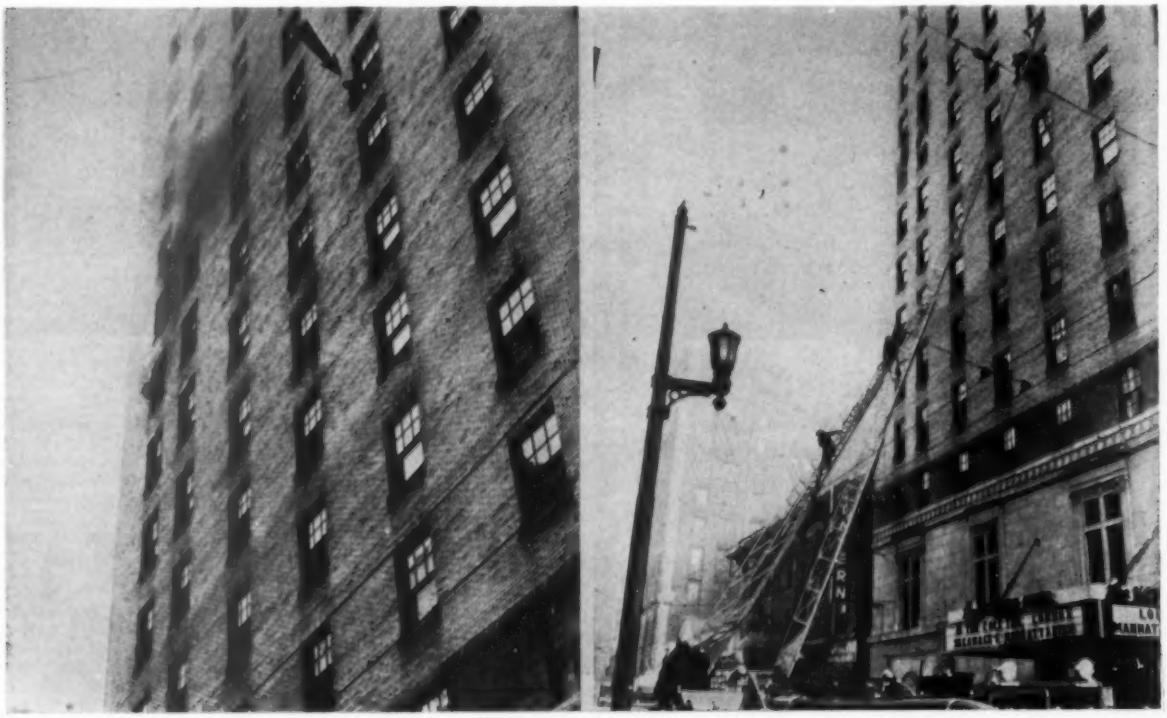
An initial effort by Assistant Chief Engineer Earl Meyers of the Huntertown company to reach the seat of the fire with two Red Comet fire bombs was unsuccessful when heat and lack of oxygen prevented his advancing further than forty feet up the stairway, about midway between the first and second floors of the cupola. The extinguishers were not used. An attempt to advance a 1½-inch line up the inside stairwell also was defeated. After penetrating about thirty feet, firemen were forced to retreat when windows let go, creating a strong down-draft. Likewise the attempt to bring into action a 1½-inch line on the outside of the building by means of ladders and scaffolding, was fruitless and the line withdrawn. All doors were closed at this time and the fire was fought from the outside.

The main water supply was a 36,000-gal. cistern 500 feet distant from the mill. One 2½-inch line was laid from the Huntertown No. 2 pump (350 GPM) and operated with a 1-inch tip from the ridge-pole of a one-story feed shed 30 feet from the elevator into a two-sash window high in the cupola. The stream, however, was only partially effective due to the gusty east wind.

Fort Wayne's Engine 6 under Captain Goeglein, after a fast run, laid two lines from the cistern. Meanwhile Huntertown's No. 1 pump (500 GPM) used its booster to cover exposures, the tank being refilled repeatedly.

As the roof of the cupola burned off more water from the outside streams effectively reached the fire. However, fire dropped into the grain bins, of which only one was nearly full. Ten bins measuring 10 x 12 feet, by 40 feet deep and three others 3 x 5 feet, by 30 feet deep all contained some fuel at the bottom on which fire could feed with maximum concealment behind the unbroken 40-foot walls.

C. W. Tucker, Chief of the Huntertown forces who was employed some fifteen miles away at the time of the alarm was called at 6:30 P.M. and on arrival at 6:55 P.M. found that only eight feet of water remained in the cis-



Picture of a Rescue at Louisville Hotel Fire

During a minor fire in a ninth-floor suite of the downtown Kentucky Hotel, Louisville, Ky., a few guests shouted for help from upper windows. One woman was removed via the department's longest metal ladder when a fireman lowered her from a ninth-floor window to his comrades atop the ladder, half-a-story below.

Hearse and Ambulance Plant a "Casualty." Explosion and Fire Destroy Plant of Flxible Co., Loudenville, Ohio, with Loss of $1,000,000

tern, at which time lines were being shut down to conserve the water supply for exposures. Chief Tucker ordered the lines kept in operation and at 7:15 requested another pumper and 3,000 feet of hose from Fort Wayne which was answered by Engine 10 under Captain Turner, and a crew from headquarters with hose. Chief Goeglein and Master Mechanic Foster of the Ft. Wayne Fire Department also responded.

Utilizing by-standers and firemen, a relay was set up to get water from a creek 2,500 feet distant, operating Ft. Wayne's No. 6 and No. 10 and Huntertown's No. 1. This relay furnished one good 2½-inch line which, with the 2½-inch line from the cistern brought the fire under control at 10:30 P.M.

Relay operations were then shifted to refilling the cistern and Fort Wayne's companies 6 and 10 and Huntertown No. 1 returned to quarters at 2:00 A.M., July 4, leaving Huntertown's smaller pump to cover overhauling operations, which were not completed until 9:30 P.M. on July 5.

Salvage is reported to have amounted to 75 per cent on grain and 40 per cent on machinery, the latter including all grinding and shelling equipment.

According to Chief Tucker, repeated requests had been made of the mill for an outside steel ladder, and that the top doors of the grain bins be hinged and kept closed when not in use. Had these requests been complied with the fire would have been confined to the cupola for a much longer time and means for fighting the fire at close range would have been provided.

Fatal Detroit Firehouse Blast

Two firemen were killed and twelve others injured, nine seriously, and a city truck driver critically hurt, by an explosion that wrecked the fire station of Engine Company 12, Twelfth Street and Merrick avenue in Detroit shortly before noon on January 16th.

Although at first believed caused by gasoline fumes which had seeped into the basement of the firehouse and were ignited by a furnace fire, subsequent investigation attributed the blast to the ignition of odorless gas leaking from pipes leading to a range in the kitchen of the firehouse when a fireman attempted to attend to the basement furnace.

At the time of the explosion, a city gasoline truck was loading the station's storage tank, through a short hose and sidewalk connection. The concussion caught the driver, Myron Simmons, critically injuring him. The fireman engaged in tending the furnace, Charles B. Parish, 41, was instantly killed. Paul J. Reiner, 28, died upon entrance to the hospital. Others injured were: Captain Daniel F. Durack; Sergeant Frank R. Bower; Firemen Thomas E. Corum, Charles J. Hively, George Schultz, Hugh Brown and Andrew Piontek, all of Engine 12. Also Lieutenant Earl M. Butts; Sergeant Wilbur E. Shook; Firemen John M. Bitten, William H. Bathurst and Grant Isaacs, all of Ladder Company 9. Butts, Corum, Hively, Brown and Bitten were released from the hospital after treatment.

Damage to the fire station was estimated at $60,000 and, according to Chief Francis J. McInnis, Buildings and Safety Engineering Department representative for the Fire Department, it must be razed.

The blast ripped up most of the first floor, tore out one side wall, and blew out most of the windows, burying many of the crew in bricks and rubble. Passersby and neighbors rushed to the rescue of the injured, aided by fellow firemen quickly summoned to the scene. The absence of ensuing fire is believed to have prevented more serious casualties.

Million Dollar Loss at Loudenville

The major industry of the village of Loudonville, Ohio, Ashland County, (pop. 2,500) was badly damaged when the two-story south wing of the Flxible Company burned late in the afternoon of January 2. Loss exceeded $1,000,000.

The building destroyed was the oldest part of the plant which comprises three connecting buildings constructed in "H" form. Nearly half of the concrete and steel factory forming the connecting link of the "H," was burned.

The company manufactures funeral cars, ambulances and large inter-city type buses. The fire is believed to have started in the paint department and was preceded by a severe explosion, the flames spreading rapidly through the wooden floors of the building. Office fixtures and records in the front part of the plant were saved by employees and firemen. None of the nearly 200 employees in that section of the structure were injured, all workers escaping within five minutes of the alarm. A plant executive said it was a miracle that no one was injured in the blast that preceded the fire. The employees near the paint department fled by fire escapes, ramps and lower windows.

Loss was chiefly in large stocks of parts and paint and between forty and fifty funeral cars and ambulances which were nearly completed.

Local fire fighters under Fire Chief Harold H. Stockman summoned aid from Wooster, Millersburg, Mansfield and Perrysville. Although the fire was controlled by 4:00 P.M. firemen continued to play water on the smouldering embers until 8:00 P.M.

Two Detroit Firemen Die when Unexplained Mid-Day Explosion Rips No. 12 Station Killing or Injuring Almost Entire Crew.

I. A. F. C. BOARD OF DIRECTORS COMPLETE CONFERENCE PLANS

Annual Meeting to Be Held in New York on August 19-22; Pennsylvania Hotel to Be Headquarters

THE annual meeting of the Board of Directors of the International Association of Fire Chiefs was held at the Hotel Pennsylvania, New York, on January 21-23.

Directors of all Districts, as well as all International officers, were on hand.

The dates selected for the annual conference were August 19-22, inclusive, and headquarters will be at the Pennsylvania Hotel, where the exhibits will also be staged.

The group heard Deputy Chief J. J. T. Waldron, Chairman of the Conference Arrangement Committee of the New York Fire Department, describe the plans for entertaining the conference. Elaborate arrangements are in the making for staging an outstanding meeting. It is expected that the attendance will reach the record-breaking figure of 2,000.

The meeting was called to order by Chief C. A. Delaney, President of the Association, after which the business of the session was promptly taken up.

The report of Secretary-Treasurer Daniel B. Tierney showed that the Association's assets today total $28,454.56. Reports of the District Associations were then presented.

The Committee on Revision of the Constitution and By-Laws, of which Chief Ray Tiller is Chairman, presented a revision of these two documents, which was approved unanimously by the Board. A very thorough job was done by the Committee.

The report of the Committee on Sustaining Members was read by E. J. McCarthy, General Sales Manager of the Gamewell Co., in the absence of F. B. Philbrick, Chairman. The Committee urged a continuation of last year's membership drive, and offered a very practical program for carrying this out.

The Committee on Hotel Fire Protection, which consisted of Chief Peter Steinkellner, Chairman; Chief Frank W. Bender, J. B. Davies, and Chief Frank C. McAuliffe, presented a very complete and practical set of recommendations for preventing hotel fires with their accompanying loss of life. This report in full is published elsewhere in this issue.

The Committee on Specifications for Fire Apparatus (George W. Booth, Chief Engineer, The National Board of Fire Underwriters, Chairman) presented a revised set of motor apparatus specifications, which were unanimously approved by the Board of Directors. These specifications will be published shortly and distributed to all members of the Association.

Chief Albert J. Sullivan, of San Francisco, Chairman of the Educational Publications Committee, reviewed the plans of his group for the collection and distribution of technical material of interest to the fire service. He urged members of the Association to forward to him convention papers and other articles which might be suitable for publication and distribution.

Chief James M. Duncan, Jr., of Alexandria, Va., discussed the problems involving the release of restricted building materials for construction of fire stations.

Fire Department Communications, especially radio, were reviewed by Roi B. Woolley, of the Committee on Communications, and Assistant Editorial Director of FIRE ENGINEERING. He pointed out the danger of the fire service losing some of the wave bands assigned to it, and urged the Board to protest vigorously to the Federal Communications Commission against transfer of any of these wave bands to other organizations.

Other subjects discussed included the annual budget (Chief William G. Wandras, Chairman), interesting the federal government in fire protection education on a national scale (Chief Daniel B. Tierney, Chairman), 1947 Conference program (Chief Henry R. Chase, Chairman), and exhibits at 1947 Conference (Chief J. T. Keegan, Chairman).

Those Present at the Meeting

Among those at the meeting were: Chief C. A. Delaney, Lakewood, Ohio, President; Chief Frank C. McAuliffe, Fire Patrols, Chicago, Ill., First Vice-President; Chief Henry R. Chase, Miami, Fla., Second Vice-President; Chief Daniel B. Tierney, Arlington, Mass., Secretary-Treasurer; Jay W. Stevens, San Francisco, Cal., Executive Secretary; Chief John H. Alderson, Los Angeles, Cal., Director, Pacific Coast Association of Fire Chiefs; Chief Ray Tiller, Waterloo, Ia., Director, Missouri Valley Association of Fire Chiefs; Chief Frank W. Bender, Saginaw, Mich., Director, Great Lakes Association of Fire Chiefs; Chief G. R. McAlpine, Oklahoma City, Okla., Director, Southwestern Association of Fire Chiefs; Chief William G. Wandras, Director, Eastern Association of Fire Chiefs; Former Chief Selden R. Allen, Brookline, Mass., Director, New England Association of Fire Chiefs; Chief William M. Mullins, Roanoke, Va., Director, Southeastern Association of Fire Chiefs, and W. J. Scott, Province Fire Marshal, Toronto, Ont., Director, Dominion Association of Fire Chiefs.

Also, Chief Albert J. Sullivan, San Francisco, Cal., Chairman, Educational Publications Committee; Chief James M. Duncan, Alexandria, Va.; Former Chief Peter Steinkellner, Milwaukee, Wis., Chairman Hotel Fire Protection Committee; J. B. Davies, Hotel Fire Protection Committee; Roi B. Woolley, Communications Committee; Deputy Chief J. J. T. Waldron, Convention Arrangements Committee; Former Chief Charles E. Clark, Wayne, Pa., Secretary, Eastern Association of Fire Chiefs; Chief James T. Keegan, Salvage Corps, Newark, N. J., Chairman, Exhibit Committee; A. J. Mullaney, Chief Fire Marshal, Chicago, Ill.

Also, John Redmond, President, and George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, Washington, D. C.; Fred Shepperd, Engineer-Manager; Chief of Staff and Operations Frank Murphy, New York Fire Department; Former Chief George Mitchell, East Orange, N. J., Treasurer, Eastern Association of Fire Chiefs; I. H. Case, Chairman of Publicity; Joseph H. Green, Eureka Fire Hose Division, U. S. Rubber Company, New York City; Chief Andrew T. Callahan, Harrison, N. J., Past President; Former Chief Samuel J. Pope, Boston, Mass., Past President; Hubert Walker, Manager, Motor Fire Apparatus Sales Engineering Div., American-LaFrance-Foamite Corporation, Elmira, N. Y.; Francis Brigham, Oren Fire Apparatus Company, Roanoke, Va.; Fred Beardslee, Vice-President & Sales Manager, Fire Engine Division, Mack Manufacturing Company, New York; Clar-

(Continued on page 125)

San Francisco's New Fire Chaplains Honored

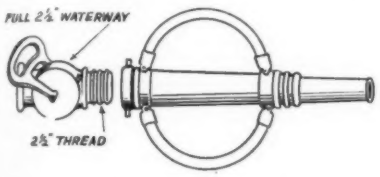
Three new Fire Chaplains of the San Francisco Fire Department were presented with gold badges, and complete protective clothing and equipment on December 11, 1946, at a special ceremony. The new chaplains shown with Chief Albert Sullivan are (left to right): Rev. Leo W. Powleson, Roman Catholic; Rabbi Rudolph I. Coffee, Jewish, and Canon Charles Shreve, Episcopalian. They agree to serve without compensation from the city. Their badges were furnished by the Board of Fire Commissioners, and their equipment of helmets, coats and flashlights was provided by subscription from the officers and members of the department.

Short Cuts and Gadgets

HAS SHUT-OFF ON T'OTHER END

John T. Gutches, Lodi, N. J., comes up with an idea and a gadget for improving the general tendency to have the nozzle shut-off on what he terms the "wrong end."

"Most hose line nozzles " he says, "have the shut-off on the wrong end.



Enclosed, please find sketch of shut-off and nozzle that we have been using for the past sixteen years. The shut-off is on the inlet end of the nozzle. In case a hose line must be extended, just shut off at the nozzle, unscrew the play-pipe, and attach anything with regular 2½-inch female thread without shutting off the entire hose line."

What do our readers think of it?—And thank you, Mr. Gutches.

* * *

KIT FOR AUTO FIRES

Our roving reporter has discovered that a number of ladder companies carry small tool kits for convenience in handling automobile fires. Some are similar to the cloth, roll tool-kit to be found in most privately owned motor cars; others are more elaborate, contain more tools, and are made up of waterproof cloth, duck or rubber.

All such kits contain a screw driver, pliers (with cutting edge) and wrenches. The smaller kits may easily be carried in a turnout pocket. One kit that intrigued our reporter had a strap which enabled the user to hook the kit to his belt, out of the way of his movements yet ready for use when needed.

Note: A number of Fire companies have special crash kits for use in fighting airplane fires, which they use also for automobile and motor truck emergencies.

* * *

BUCKETS STILL NEEDED EQUIPMENT

Recently, speaking about the changes in the fire service, a chief commented that buckets, like hay forks, are seldom to be found on fire apparatus any more.

We don't know where this chief got his information, but so far as the buckets go, we find they are still included as "F D Equipment" on many pieces of fire apparatus.

Noticing a 'nest' of four metal buckets on a municipal ladder truck, not long ago, we asked the officer "how come"?

"We use 'em a lot," the officer said. "Frequently when we encounter a trifling fire in a store or home and we don't want to use a hose stream (even though we have it handy), we may use the bucket, either to douse the burning material in it, or to carry a little water to the fire. We also use it in salvage work, as a receptable for valuables, or evidence—or in which we can douse smouldering material of some reclaimable value. You see, although you would think every family or shop would have a common household bucket or pail, the fact is that they may not, and it is well to be prepared."

Not long ago we saw a pail used in another way at a fire. It was necessary to hoist some medical equipment to the roof of a tall building and the pail made an excellent container for the several small objects. We might add, in closing, that we find pitchforks also are in use in many cities (as well as rural departments) largely for overhauling operations.

* * *

The Old Timer Says—

The good fireman is distinguished by his efforts and ability to do a "professional" fire fighting job. What do I mean by "professional"? Well, the difference between the "professional" and the makeshift, amateur fire fighting job is the same sort of difference you see between the carpenter work done by an experienced journeyman carpenter, and a "Jack-of-all-trades." Just as there's a right and a wrong way of doing any job in any trade or profession, so there is a right and a wrong way of doing a fire extinguishing job. And the work of the seasoned "professional" master-fire-fighter sticks out above that of the neophyte and the green amateur like a twelve-foot pike-pole!

* * *

CONVENIENT HOSE HANDLES

From Ernest R. Lavoilette, Fire Station 10, New Bedford (Mass.) Fire Department, comes a handy gadget for handling large hose under pressures where fog nozzles are used.

Fireman Lavoilette writes: "Here's a gadget I made for use with our Navy-type fog nozzle. With these handles we find the nozzle much easier to handle with the line under pressure.

"Fig. I shows the gadget clamped on the male coupling of a length of 2½-inch hose. (A) is the only metal part, except for the buckle on the strap (B). Straps (C) are riveted to strap (B) after having been passed through loops (L) shown on Fig. II.

"All parts are made from scraps picked up at the repair shop."

Thank you, Brother Laviolette!

* * *

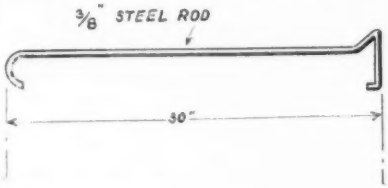
The Old Timer Says—

"When you're using a plaster-hook, it's well t'remember that the lath in the average ceiling runs from front to rear, the only exception being the top floor of most buildings, where it runs cross-wise."

* * *

NOVEL UTILITY HOOK

Here's an idea, passed along to FIRE ENGINEERING by Captain Arthur Stone of San Francisco, Calif. for a handy little "dohickey" that any progressive "firemechanic" can make, and which



ought to make some jobs easier and safer. But let Captain Stone tell it—

"I would like to submit my gadget that I made some time ago. I had in mind some kind of hook to remove seats and hot springs from automobiles, trucks, etc. The illustration shows a device that resembles a hay hook except that it is much longer, and we have found this hook works much better in close places than a pike-pole."

Captain Stone doesn't go into the details of the materials used, but our "firemechanical" friends won't have much trouble on that score—and the Captain offers no restrictions as to the adoption of his idea.

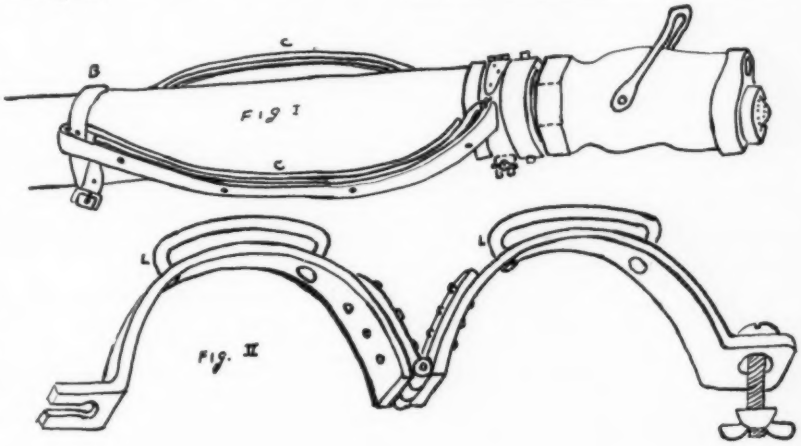
Thank you, Captain Stone!

P. S. Incidentally this might have some use in fighting aircraft crash fires!

* * *

The Old Timer Says—

A six foot hook is a good thing to have handy if you're navigating an apartment house or tenement roof on a dark night, and mebbe in the smoke. It'll locate clothes lines, radio aerials and shaftways and even the edge of the roof for you, if you keep it with you and use it properly!



For Practical Discussion of Current Fire Department and Fire Management Problems

COLLECTING FEES FOR PERMITS

THE chiefs participating in this round table are almost unanimous against firemen collecting fees for issuing permits.

Those who are opposed to this practice say that firemen have enough to do with fighting fires, making inspections, maintaining apparatus and equipment and training, without having the added duty of collecting fees.

Most chiefs believe, however, that firemen should issue permits for garages, fuel oil, explosives, etc., for in that way they will be able to keep in close touch with the installation and hazards involved should a fire occur in the occupancy. But fees should be collected by some city collecting office, rather than by firemen.

Readers are invited to send in their comments on this subject which will be continued in the March issue. Address communications to Round Table Editor, 24 West 40 Street, New York 18, N. Y.

Discussion of the Topic

Charles E. Lane, Chief, Great Falls, Mont.: The firemen in this city do not collect any money for permits of any kind. These permits are given through the building inspector or through the treasurer's office or granted by the City Council and Engineer's office.

On any oil or gas installation the fire chief or his assistant is called in on the inspection of the installation before it can be used.

As far as the firemen giving out permits is concerned, I believe that this should be given to someone who is dealing with the construction and workings of these various permits.

S. D. O'Connor, Chief, Beaumont, Tex.: The only money collected is for inspection work done by the fire marshal who has to inspect all installations of gasoline tanks, butane, etc. He sees that the tanks, pumps and installations are made in accordance with National Board of Fire Underwriters specifications. A fee of five dollars is collected for this service.

Clyde L. Peterson, Chief, Ogden, Utah: This city does not have a special fee for special permits. However, we do issue a permit to places of a more hazardous nature after they have compiled with our regulations.

The office of City Recorder is the collection agent for city licenses. All businesses are required by law to have a license to operate. After they make application, the Fire, Police and Health Departments make inspections, and if satisfactory, their license is granted. Any one of the three departments has the right to reject a license.

The job of collecting fees, in my opinion, should be up to the license division rather than to the firemen. Firemen should only be required to make inspections and enforce their regulations.

G. F. Nalley, Chief, Little Rock, Ark.: Firemen in this city handle no money. All collections are made by the city collector's office.

I believe firemen have enough to do without making collections.

L. A. Moore, Chief, Fresno, Cal.: The fire department members do not collect money from fees in Fresno.

The Department of Finance collects all taxes and dues from garages, storage of explosives, etc.

I believe that members of the Fire Department should collect fees for permits for garages, fuel oil, explosives, etc. In this way the members are in touch with dangerous installations immediately and can in turn supervise the installation and correction of these hazards, if necessary. We feel that firemen are the best judges of such conditions.

Harold Crawford, Chief, Jackson, Mich.: The State of Michigan through the State Police makes all collections of fees.

It would not be practical for the fire departments in the individual cities to do this work because of the shortage of manpower and the lack of equipment.

Waldo Merrill, Chief, Council Bluffs, Ia.: We do not even have an ordinance controlling flammable liquids, explosives, poison gases, etc. For this reason there cannot be any fees collected by anyone.

I believe that some central office such as the City Clerk or Building Department, could issue a receipt for a permit or license. A copy of the receipt should be furnished to the Fire Department and this department issue the permit or license if the conditions meet with their approval.

I also believe that any monies received for permits or licenses pertaining to fire hazards should be placed in the fire department fund to help defray the expenses of the Fire Department Inspection Bureau.

Thomas H. Shipman, Chief, New London, Conn.: Until about five years ago collections for gasoline storage, oil burner permits, amusement machines, etc., were made by members of the department. Records were kept of the amounts received and the money turned over to the City Treasurer. Several discrepancies crept into this system on several occasions and it was reported to the City Manager. As a result, orders were issued that a city cashier would be on duty during business hours at city hall and that he was to collect all monies for the city. The applicant need only show the department the receipt and the license would be issued.

This system is far superior to the old method in that there is no longer the responsibility of money collections.

A. McC. Marsh, Chief, Columbia, S. C.: Permits are recommended after examination. Money is then paid to the City Treasurer and a receipt given. The license is given upon presentation of the receipt.

Otto W. Johnson, Jr., Chief, Easton, Pa.: Members of the Easton Fire Department do not collect money due for permits. This is done by the various offices at City Hall.

If firemen collected monies for permits, they would not be firemen, but part-time firemen. I feel that regular offices should be established to handle those affairs and firemen should concentrate on fire fighting alone. I cannot visualize any benefits from firemen acting as collecting agencies.

Wilbur T. Wright, Chief, Amsterdam, N. Y.: Permits are issued by the City Engineer's office for fuel oil tanks, oil burners, replacing of tanks, etc. We have an ordinance that requires a three dollar deposit for each permit. After this is issued and before the tank is covered an inspection must be made by the chief or assistant chief. This also holds true for oil burner installations.

The fire department has enough to do without issuing permits. My judgment is that the Building Inspector should issue the permit as it sometimes means three or four extra trips for us to inspect the premises.

At the present time so many buildings are being converted that I believe inspections and the issuing of permits should be handled by the City Engineer, who is also our Building Inspector, as he knows the type of construction of the building, etc., and can determine whether or not a permit should be issued. It would be necessary for us to go and look the situation over before we could issue such a permit.

M. G. Bennett, Chief, Orlando, Fla.: Fees for permits are collected by the Building Inspector's office.

(*Continued on page* 122)

HERE IS THE QUESTION

1. **Do members of your Fire Department collect money due for various permits, such as garage, fuel oil, explosives, etc.?**
2. **If not, by whom is collecting done?**
3. **What do you feel to be the principal objections to having this work done by firemen? Or, what are the principal benefits of such a plan?**

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

All in the Day's Work

An anything but a "still" alarm was sounded in fire station No. 30 of the Indianapolis, Ind., Fire Department, in the early hours of the morning when Aaron Collins burst in and cried "M-m-my w-wife's g-g-going to-to h-h-have a b-b-baby!"

Lieut. Lawrence Stiegelmeyer, on duty, immediately awoke fireman Thomas Hannon of that station out of a sound sleep, dispatched him on the jump with Collins, and called City Hospital for emergency medical aid.

But the unpredictable stork outraced Dr. Ray Henn, City Hospital interne, to the Collin's home, and gave Fireman Hannon his toughest assignment in eight years of fire department duty—delivery of a squalling eight-pound, four-ounce baby boy.

Hannon's "midwifery" was sort of "remote control" delivery, with instructions being telephoned by his wife, Mrs. Virginia Hannon, a graduate of the Methodist Hospital School of Nursing, herself a mother of two.

One "sizeup" of the situation at the Collin's home convinced Hannon that hospital aid would never arrive before birth. Dashing back to the fire house, he called his wife, received the instructions and tore back to the Collin's home—and duty.

Next day, Dr. Henn pronounced both Collins and baby in "excellent condition" as a result of Fireman Hannon's skill and care. Hannon, it's said, had wanted at one time to be a physician but had to abandon pre-medical studies due to financial difficulties and enter the fire department. Hannon agrees that the fireman's job is much simpler than midwifery and as far as ever going in for the practice of medicine—that's out!

(Thanks, Lieut. Del' Embhardt.)

* * *

Caught with His Pants Down!

The press of Washington, D. C., gave space to the story of a painter who was daubing a flag pole atop the lofty Kellogg Building in F street. During "operations" his pants in some inexplainable manner dropped to "half-mast" or below! There the painter dangled, "up in the air" in more ways than one, while the gaping crowds grew.

Here was an extra-curricular job for the rescue squad. We're not given the details as to how the victim's trousers were hoisted while he was lowered, but it just goes to show what firemen have to contend with! (Thanks Irving Johnson.)

* * *

What Noise Annoys an Oyster?

An item in the "Voice of the People" column of a Washington, D. C., paper, forwarded by newsleuth Irv' Johnson says:

"Fire house stations located in the densely settled neighborhoods in Alexandria have sirens mounted on top of the fire houses that are turned on for each fire alarm turned in—four long blasts as a summons for the 'volunteer firemen'. Citizens in some of these neighborhoods have petitioned the city council for relief—they say these noisy blasts occurring at all times of the night are terrifying, and living in these neighborhoods is a nightmare.

"It is claimed Alexandria, Va., is the only city in the country of the same population and tax rate that operates their fire department by volunteer firemen.

"(Signed) Indignant"

Well, haven't we heard that Chief James Duncan of that fair city, has petitioned and pleaded for more paid men?

* * *

Rescue Squad "Mops" Up—

And child nearly kicks the bucket, is the way this yarn, from A. E. Hart of Sacramento, Calif., might be headed. But it's just another of those extra curricular jobs rescue companies take in their stride.

Seems that little Miss Clifford, of Sacramento, decided she would give herself a bath in her mother's mop bucket on the back porch of the Clifford home. After some time, her mother missed her and a search revealed her wedged tightly in the bucket caught under the wringer machinery.

The Sacramento F. D. Rescue Squad, and Assistant Chief A. W. Boothby, rushed to the scene with the necessary tools and snippers, and set the baby free. Then they massaged the tot's legs to bring the blood back into 'em—and headed for their station.

* * *

Quotes from Clipper Johnson—

Demon news sleuth Irving Johnson, of Takoma Park, Md., has been going "at a merry clip". From the bundle of bright things he contributes, we have room for the following:

TORRINGTON, CT.: When the Burrville Volunteer Fire Department installed its brand new siren, officials announced the test would be held at 11:00 A.M. Well, it was, and it worked. So, when Chief William J. Canty heard there was a barn afire, shortly before noon, he confidently sounded the new siren alarm. But the volunteers all thought it just another test and Chief Canty hadda respond alone, while help was being sought from the Torrington Fire Department. Uh huh—the barn on the farm of H. E. Waldron burned down.

CHAMPAIGN, ILL.: Fire Chief R. W. Alsip groped his way through the smoke and opened the bathroom door in Harry Burke's home. Burke's 7-year-old son, Bernard, was in the bathtub reading a comic book. "Don't you know the house is on fire, son?" Alsip asked. "Yep" the lad replied. "Aren't you worried?" the chief queried. "Nope" came the reply, "the firemen'll put it out!" And they did!

WENHAM, MASS.: Just as Edward Sargent was whetting his Thanksgiving appetite, he had to have his turkey wetted down. Sargent was fattening a turkey in a cage at the rear of his home. The bird took off and flew to a rooftop. After all other efforts failed, firemen played a hose stream on the turk' and, says the wayward press, "weight of water finally forced the bird to the ground!"

GLENDALE, CALIF.: The world's biggest beehive was discovered at the lookout tower on Johnstone Peak of Mt. Baldy by forest rangers, who re-opened the tower for the fire season. V. E. White, fire control assistant, and lookout man Everett Osborn were routed by thousands of bees when they opened the shutter entrance. A bee expert hastily called, corraled the swarm—and ten pounds of honey!

WINCHESTER, VA.: This happened on January 10 last—not during the forest fire season. Firemen were called out here to extinguish a treetop blaze in a large maple in the city's residential section. The freak blaze was believed started by a spark from a chimney.

ENDICOTT, N. Y.: "Punkin," a parrot, knew something was amiss on the morning of Jan. 3, but couldn't find a word for it. The house was on fire! "Hey pete!" the parrot screamed until Theodore E. Peters awoke and dashed downstairs yelling "Fire!" That fixed "Punkin." "FIRE!" the bird shouted. Peters extinguished the blaze and "Punkin" spent the rest of the day practicing the new word!

KANSAS CITY: This has to do with the powers of suggestion. Firemen, battling a blaze in a tavern and restaurant, remembered suddenly the three-pound roast they'd put in the oven at Station No. 9—their house—two hours earlier for their Sunday dinner. There was much ado. But Patrolman William Redmon eased their worries by rushing to the station and basting the meat loaf at noon. However, the dinner wasn't rescued until Fireman B. F. Merino was overcome by smoke and ordered back to quarters at 2:00 P.M., where he recovered quickly and got busy. Even so, "it was the driest meat loaf I ever ate, Merino said. I think it was overdone." Yeah—mebbe about three alarms worth!

* * *

Judge "Boots" Juvenile Jokesters

Wilbert Zimmerman and Fred Kowalsky, both of Hempstead, N. Y., told trial judge Harry Kilbourn in court, at Litchfield, Conn., that in their town it was considered quite a joke to "lift" firemen's boots from fire trucks. Therefore, they said, they were only following a common practice when each took a pair of boots from a Litchfield fire truck as it was parked in Bantam Center on a Saturday, returning from a firemen's parade. The defendants, who pleaded guilty to theft, said they intended to return the boots, but State Policeman William Towne found 'em first. Justice Kilbourn couldn't see the joke, and "booted 'em" to the tune of $7.50 each. (Thanks Horace Clark, N. Granby, Conn.)

* * *

Hot Off the Tape

We've filed away Oswald Garrison Villard's definition of a newspaper reporter. To wit: "Trained to ask questions, and possessor of that conditioned reflex of all good reporters which makes

(*Continued on page* 131)

FALSE ALARMS

Remembered Lesson

"Why," said the First Aider arriving at the regular meeting, "yesterday I was sitting at home when I heard a terrific crash. Two cars had turned over in front of our gate. One woman had a deep cut in her arm, two men had broken legs, and another severe lacerations of the face. But, thank heaven, I remembered what you had taught me, put my head between my knees—and didn't faint."

When the world seems sad and blue,
Think of this because it's true.
In the graveyard there's lots of guys
Who'd gladly change with you.

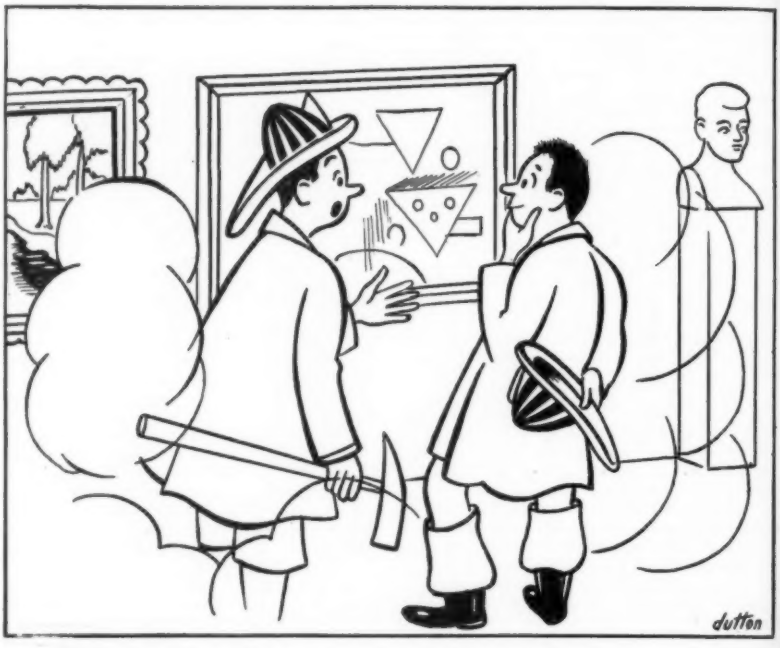
"Sorry, Madam, but licenses are issued only when your form is filled out properly."

"Why, I like your nerve, sir. We can get married, no matter what I look like."

"Now," she asked, "is there any man in the audience who would let his wife be slandered and say nothing? If so, stand up."

A meek little man rose to his feet. The lecturer glared at him. "Do you mean to say you let your wife be slandered and say nothing?" she cried.

"Oh, I'm sorry," he said, "I thought you said slaughtered."



"Now That the Fire's Out, Let's Take a Look Around. I Haven't Been Inside a Museum in Years!"

Here's an old story about Dorothy Parker who hates to travel. She was trying to make herself comfortable in the Sky-Chief, when a large and nosey man buckled himself into the seat beside her. After several attempts to start a conversation, he pointed to the basket at Miss Parker's feet, and asked:

"What've you got in there?"

"A mongoose," said Miss Parker.

"What's a mongoose?"

"A little animal that kills snakes."

"What are you going to do with it?"

"I'm taking it to my brother who has hallucinations and sees snakes!"

The man stiffened incredulously. "But they're imaginary snakes!"

"Yes, I know," Miss Parker observed acidly. "I'm taking him the same kind of mongoose."—BENNETT CERF, *Scholastic*.

As the doorman ran down to open the limousine door, he tripped and rolled down the last four steps.

Club Manager: "For heaven's sake be careful, they'll think you're a member."

"I'm very careful; I always send my children out of the house before I quarrel with my husband."

"The little dears—they look so healthy from spending so much time in the open air."

A doctor tells this one on himself and a certain spinster:

Doctor: "My dear, all you need is a little sun and air."

Spinster: "Why, Doctor, how can you say that? I've not even married yet."

"Drop What You're Doing, Henry, and Come Upstairs. The House Is on Fire!"

To Who It May Concern

I hereby apologizes for shooting rock salt at that couple in my patch the other night. I thought they was swiping watermelons.—EZRA WEDGE.

FOREMAN'S REPORT

PERFECT PERFORMANCE 1923-1947!

- Never a shut-down due to mechanical trouble
- Easy to operate
- Based on 24 years of dependable service, First Hagerstown Hose Company again purchases an AHRENS-FOX

W. EDWARD HEIMEL, TREASURER

R. F. KOUNTZ, SECRETARY

L. MOBLEY, PRESIDENT

First Hagerstown Hose Company

Hagerstown, Maryland January 21st, 1947.

Mr. R. N. Smith, Vice President
The Ahrens-Fox Fire Eng. Corp.
Cincinnati 12, Ohio

Dear Sir:

The First Hagerstown Hose Company of Hagerstown, Maryland, purchased an Ahrens-Fox Pumping Engine of the Piston Type in the year of 1923 and it is still performing in a very satisfactory manner.

We have used Ahrens-Fox equipment under all conditions, including very severe weather, and have never had to shut down on account of mechanical trouble. It carries our recommendations as a very fine piece of fire apparatus, easy to operate and giving fine performance under all conditions.

We have purchased and was delivered on December 28th, 1946, a 1000-gallon per minute pumping engine of the piston type including the new Ahrens-Fox twin triple combination Piston Pump, which is the last word in fire fighting equipment.

Respectfully yours,

D E Beckley

Foreman,

First Hagerstown Hose Company

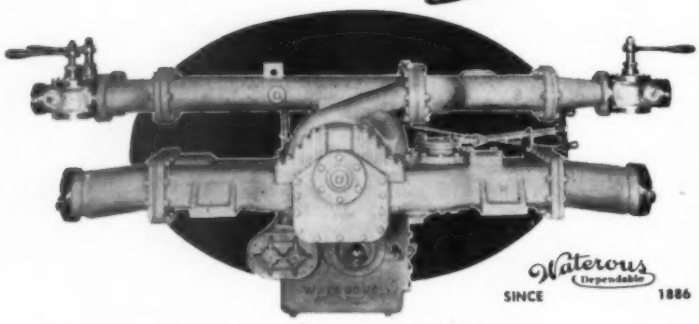
AHRENS-FOX

The new Ahrens-Fox Model H.T. 1000 g.p.m. Twin-Triple Piston Type, Triple Combination Pumper just delivered to First Hagerstown Hose Company.

AHRENS-FOX FIRE ENGINE CORP., CINCINNATI 12, OHIO

A PUMP FOR EVERY PURPOSE

You get VOLUME with a Waterous!



Users all over the country testify, "you get lots of water . . . with a WATEROUS."

WATEROUS Fire Pumps rate high with fire chiefs because they can be counted on to perform satisfactorily hour after hour. These pumps are standard equipment on many leading makes of fire apparatus. Specify WATEROUS on your next job.

Write for your copy of the WATEROUS Fire Pump Catalog. Complete data; colorfully illustrated.

Also Manufacturers of WATEROUS Fire Hydrants

WATEROUS FIRE PUMPS

WATEROUS COMPANY · ST. PAUL, MINNESOTA

Persons in the News

Harvey Maples Dies

Harvey H. Maples, 59, who organized the Clinton Engineering Works' Fire Department at Oak Ridge, Tenn., died recently following a heart attack.

Maples joined the Knoxville Fire Department in 1910 and became captain in 1919; he resigned to accept the Oak Ridge assignment in 1943, which post he held until last November when he resigned.

Chief Edwin Bryant Retires

Chief Edwin Bryant, for sixteen years head of the West Allis, Wis. Fire Department, retired on his own request, December 31 last. He is the last surviving member of the original West Allis Volunteer Fire Department in active service, having served under the first fire chief, Eugene Braunschweiger, and the first full-paid chief, Peter H. Burbach, both deceased.

Chief Bryant entered the fire service May 15, 1905 as a private, was appointed captain in 1910 and on September, 1916 was advanced to assistant chief. On December 26, 1930 he was made Chief of the Department by the Board of Police and Fire Commissioners.

In his long and busy career in the fire service Chief Bryant took an active part in promoting better firemanship. He is a member of the International Association of Fire Chiefs and other fire service organizations.

Chief W. J. Sands Retires

Deputy Chief Robert Fenby was designated Acting-Chief of the Quincy, Mass., Fire Department to temporarily fill the post left vacant by the automatic retirement of Chief William J. Sands. Fenby is senior of the two deputies.

Chief Sands's retirement comes after he had served sixteen years as chief of the department and is the result of recent action of the city council in accepting legislation lowering the mandatory retirement age of firemen and policemen from seventy to sixty-five years.

Commenting on the chief's retirement, Mayor Ross of Quincy said that "the city and the department loses a fine fire fighter and an inspiring leader of men."

Examinations to establish a list from which the permanent new chief of department will be selected have been set for February 10, by the civil service commission. The Mayor is also to appoint a permanent deputy chief to take the place of Deputy Chief John L. O'Neill, who recently retired.

Chief E. C. Palmer to Retire

Fire Chief Edward C. Palmer, veteran of nearly forty years of fire service and since 1943 head of the Grand Rapids, Mich. Fire Department, will retire on March 5, 1947, upon reaching the retirement age of sixty.

Chief Palmer, widely known fire officer, and popu'ar host to the International Association of Fire Chiefs at its 1944 conference in Grand Rapids, began his career as a driver at Engine 3, in Grand Rapids, was appointed lieutenant

INDIAN FIRE PUMPS

win the praise of all who use them . . . . .

PATENTED

, air-cooled
carries on
ack like a
basket. A
with an
AN FIRE
P can get
quickly.
ed to lay
Any water
serves for
filling.

"Would not be without them" . . . "Worth their weight in gold" . . . "Finest fire fighter on the market". These are typical expressions from men who have used *INDIAN FIRE PUMPS* and *know* what they will do in putting out fires in houses, buildings, roofs and forest, grass and grain field fires.

Remember the name *INDIAN*. It is your guarantee of a fast, economical, sturdy fire fighting unit which will give years of service. And clear water alone does the job — no chemicals.

Ask for our latest catalog which illustrates and describes the complete line of *INDIAN FIRE PUMPS*. It shows many pictures, gives copies of testimonials and full information.

.B. SMITH & CO.

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PACIFIC COAST AGENTS

CANADIAN AGENTS

Serves Best . . .

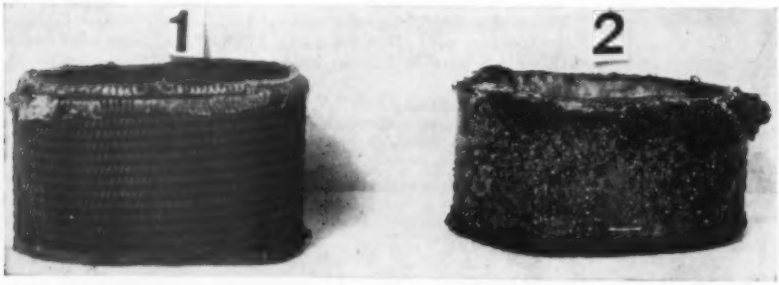
. . . Where Conditions Are Worst

MANHATTAN

RADIO-ACTIVE TREATED FIRE HOSE

In freezing weather Manhattan's Radio-Active Treated Fire Hose stays flexible—USEFUL. Manhattan has developed a way of treating fire hose cotton jackets with certain salts of rare earth metals, having radio-active properties that repel water and moisture. This treatment doesn't wear off—it lasts for the life of the hose.

Radio-Active Treated Hose doesn't get water-soaked, doesn't require drying out. Folds flat and is always ready to use. Manhattan is the *sole manufacturer* of this patented Radio-Active Treatment.



Pieces of "treated" fire hose—after 3 months identical incubation tests. No. 1 is Manhattan Hose treated by the Radio-Active process. No. 2 has had ordinary mildew-resistant treatment. No. 2 had lost nearly 80% of its original strength.

RAYBESTOS-MANHATTAN INC.

Keep Ahead with Manhattan

MANHATTAN RUBBER DIVISION **PASSAIC, NEW JERSEY**

ten years later, and in 1920 became captain. He was advanced to chief of the 2nd Battalion in 1922 and in 1938 was made assistant to Fire Marshal Fred Higgins. Following the latter's retirement in 1943, he assumed command of the forces.

Chief Palmer has not announced his plans for the future. He has recommended Deputy Chief Frank Burns as his successor, a selection endorsed by City Manager Frank Goebel.

Auburn, Calif., Chief Resigns

S. Guy Lukens, since 1905 head of the Auburn, Cal. Fire Department, resigned on December 31 last, ending a career of over forty-five years' fire service. Chief Lucas was elected second assistant of the department in 1903 and first assistant the following year; in 1905 he was elected foreman. "Guy," as he was popularly known among Pacific Coast firemen, took an active interest in local and state fire service matters. He also served his community as Assessor. He is a member of the Pacific Coast Association of Fire Chiefs.

Chief Noble to Retire

Fire Chief William J. Noble of the New Britain, Conn., Fire Department, has been granted retirement, effective March 31, by the Board of Fire Commissioners. Chief Noble has been a member of the New Britain Fire Department for 52 years and Chief since 1920. T. F. MAGNER

Cannon Succeeded by Woolard

Fire Chief Edward J. Cannon, since 1939 Chief of the Norfolk, Va., Fire Department, retired January 1. His successor is Deputy Chief Robert L. Woolard, veteran of thirty years' service, and ranking deputy of the department.

Chief Cannon, whose future plans are unknown, joined the Norfolk Fire Department in 1906, and succeeded the late Richard S. Baughan as head of the force. Chief Woolard was elevated to the rank of deputy twenty-five years ago. He is fifty-three and entered into his career of professional fire fighter at twenty-three. He has served in almost every rank in the department.

Cox Heads Durham Force

Cosmo L. Cox has been named Chief of the Durham Fire Department, Durham, N. C., it was announced by City Manager R. W. Flack. He succeeds the late Chief Frank Bennett. Claiborne H. Lawson, Captain of Hose No. 2 was appointed Assistant Chief.

Chief Cox joined the fire department March 15, 1929, and served with it since that time with the exception of nine months when he filled the post of assistant chief and then acting chief of the Fort Bragg Fire Department.

Long Branch Has New Chief

Edgar E. (Skelly) West, Long Branch, N. J., merchant and former professional athlete, was appointed Chief of the Long Branch Fire Department January 1.

He follows Paul F. White, outgoing

DRENCH triples your water supply!

When you get in to kill a fire, it helps to know that you have enough water to do a complete job . . . knock it down and keep it down.

That's what DRENCH will help you do. Just a 1% proportion by volume added to your water supply will triple its fire fighting effectiveness. DRENCH extends your water coverage . . . fights fire faster and is also effective on oils with flash points of 100°F, or higher. Its deep penetration prevents recurring blazes, reduces the need for re-wetting and conserves your water supply.

Wardens, Rangers, Volunteer Companies and other fire-fighting groups who are constantly confronted with limited water supply should have this new, amazing extinguishing agent on hand at all times. DRENCH is easy to use. There's no complex procedures to obtain correct proportions and it can be used in all common types of equipment.

Send for complete information and see how DRENCH will triple the water supply in your fire fighting equipment.

Pats. Pending

DRENCH
AN ONCO FIRE SPECIALTY

DRENCH should not be used in Soda Acid Extinguishers or Calcium Chloride Solutions

ARNOLD, HOFFMAN & CO., INC.

FIRE SPECIALTIES DIVISION

55 Canal Street, Providence, R. I.

It will help if you will mention FIRE ENGINEERING *when writing advertisers*

CHIEF POWHATAN
REG. U.S. PAT. OFF.

FIRE PREVENTION PRODUCTS

"Stand up" where others fail!

HOSE ADAPTORS
all sizes
MALE and FEMALE

Every thread precision cut, and made to fit like a glove. Note the ruggedness of these three connections.

PLATE 140

FIRE DEPARTMENT HOSE CONNECTIONS
all sizes

DOUBLE MALE

Solid machined brass. Takes the hard knocks. They stand up where others fail.

PLATE 114

DOUBLE FEMALE

We have been manufacturing fire prevention products since 1892. During these many years we have furnished fire departments throughout the country with fittings that have proven their value under the most trying circumstances. This is proven to the fullest by the many repeat orders.

With our years of experience, our engineering department can be depended upon to take care of your particular requirements. Let us send you bulletins 5 and 6 devoted entirely to Fire Departments.

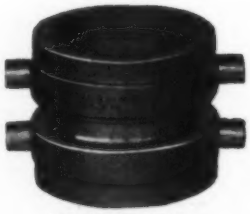


PLATE 115

POWHATAN BRASS & IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town West Virginia - Established 1892

fire chief, who was presented a gold wrist watch by members of the department. The new chief was in turn presented with the insignia of his office, and his uniform, by the Officers' Association.

Arthur Griffin is the new first assistant, and Joseph Callahan, second assistant of the department.

Salyers Covington Chief

Walter Salyers has been named head of the Covington, Ky., Fire Department by City Manager Theo. Hageman, following the resignation of former Chief Northcutt because of ill health.

The new chief was presented with a gold badge of office at a surprise party given him by more than 100 business men, city and county officials and representatives of the Northern Kentucky Firemen's Association in December.

Henry Heads Tahoe Forces

Albert Henry was appointed Chief of the Tahoe, Calif., Fire Department, December 16, 1946, by the City Council. He was formerly a Captain and is a member of the Northern California Fire Chiefs Association; California State Firemen's Association and the Pacific Coast Division of the International Association of Fire Chiefs. He has been a member of the Tahoe Fire Department for about twelve years.

VICTOR P. BARTLEY

New Cleveland Safety Head

William F. Smith was appointed to head the Fire and Police Departments of the City of Cleveland, Ohio, by Mayor Burke, January 1st. He was formerly a special agent for the Federal Bureau of Investigation. The new safety head has announced no definite plans for the fire department.

Williams Chief at Elkhart

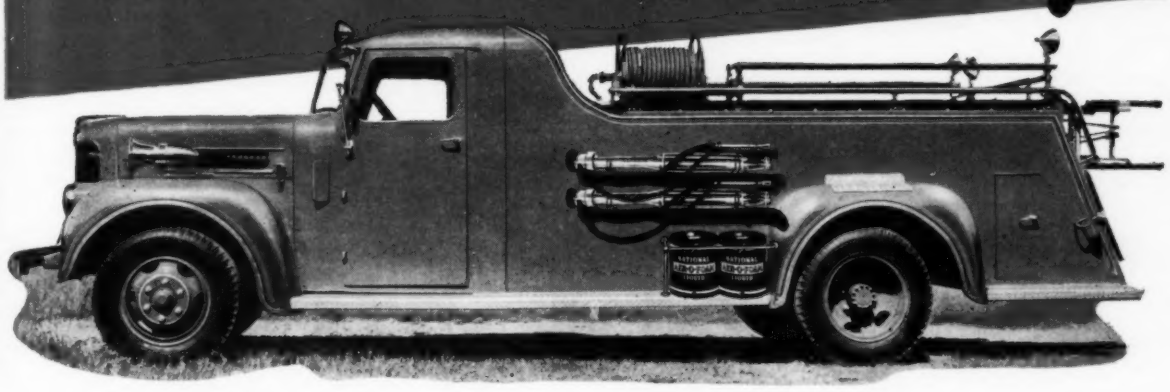
John E. (Jiggs) Williams, former Elkhart High School athlete, was named Chief of the Fire Department on January 1, by Mayor Hallett Neale, succeeding Chief Richard L. Minser, who resigned recently. Minser asked and received a demotion, explaining that relief from added duties as chief would give him time for outside work.

New York Creates New Fire Post

Fire Commissioner Frank Quayle has created by special order the post of Chief of Staff and Operations in the New York Fire Department and named Acting Chief of Department, Frank Murphy, to fill the position. The new job will pay $11,500 per annum and the salary of the Chief of Department, heretofore $12,000, has been reduced also to $11,500 to bring the two positions in line. It is understood the creation of the post and designation of Chief Murphy as its incumbent has the approval of Mayor O'Dwyer, long a close friend of Chief Murphy.

The appointment, said to establish the first such ranking office in the annals of the fire service, places Chief Murphy in a superior position to any new Fire Chief who may emerge from the competitive civil service examination to be held for the position on February 13

FIRE-FIGHTERS PACK AER-O-FOAM for TOUGH OIL FIRES!



Experienced fire-fighters know that NATIONAL Aer-O-Foam, war-proven by the U. S. Navy, is now MUST equipment for speedily putting out, and keeping out, gasoline, oil or chemical fires.

NATIONAL Aer-O-Foam, a mechanical foam, forms a thick, tough and lasting blanket. This blanket seals flammable gases in, *keeps oxygen out,* actually smothering the fire. It prevents flash-backs, insulates threatened areas. It flows rapidly, clings fast to angular as well as level surfaces and is *non-corrosive.* It can be applied in a stream or fog.

NATIONAL FOAM manufactures chemical and mechanical foam, specially designed nozzles and other equipment for applying them. Our thoroughly trained staff of engineers is ready to serve Fire Departments. We have the experience to solve your problems. *Write, Wire, or Call.*

NATIONAL FOAM SYSTEM, INC.

Headquarters for Foam Fire Protection

Packard Building, Philadelphia 2, Pa.

BUT .NO SNAKING OR WRITHING

In every "Streamlined" Eureka Fire Hose, two special developments known as Balanced Weave and Controlled Curing eliminate dangerous twisting or serpentining under high pressure.

Long life and ruggedness have been engineered into Eureka, without sacrificing flexibility or adding excess weight. Every length is tested for burst resistance, elongation, warp and twist. An Oxygen Bomb Test proves the aging qualities of the lining, Eureka's exclusive Smooth Interior Filler Ply insures maximum pressure at the nozzle, and mildew is prevented by "Formula X."

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

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and for which there are reported twenty contestants. Commissioner Quayle said that creation of the office was in line with administrative practice in the Police Department, which also has a Chief of Staff, in charge of administration matters, directly under the Police Commissioner.

The new insignia of the Chief of Staff, it is understood, will include six gold trumpets one more than the traditional five trumpets which has heretofore designated the heads of fire departments.

Obituaries

Harry T. Webb, 63, Fire Chief of the Oak Bluff, Mass., Fire Department and motor vehicle inspector for Martha's Vinyard, Mass., died late in 1946 following an operation. He joined the department in 1936.

Chief G. S. Hayes, head of the Woodstock, Ont., Canada Fire Department, died December 7. He was an active member of the Dominion Association of Fire Chiefs.

Elections and Promotions

Fire Chief Joseph Flescher of Olyphant, Pa., was reelected by the members of that Volunteer Department which consists of five companies. Olyphant has a population of 5,000, and is located in the Lackawanna Valley near Scranton. Chief Flescher has been in the Olyphant Fire Department 20 years.

JERRY DALY

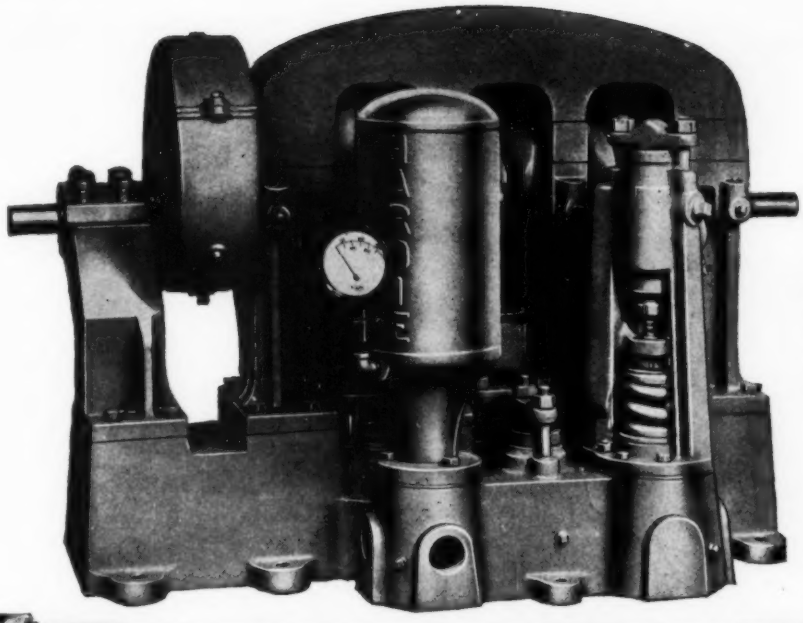
Edward R. Wilson, formerly assistant chief, succeeds Earl Curry as Chief of the Amarillo, Tex., Fire Department, the latter being transferred to the fire marshal's department as deputy. The new chief joined the department in 1926.

William J. Hennessey, Deputy Chief of Department in Charge, Headquarters Staff, has been designated as Acting Assistant Chief of the New York Fire Department, effective January 23, 1947. Battalion Chief Max Vallen, Headquarters Staff, has been designated an Acting Deputy Chief of Department.

Floyd Kendrick has been appointed Chief of the Shreveport, La., Fire Department, replacing Sloan J. Flores.

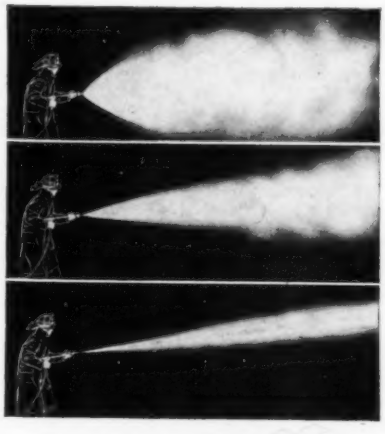
The following have been elected fire chiefs in charge of their respective departments:

William Moore, Hudson, N. Y.
Henry Geitzen, Auburn, Cal.
Aubrey Hodges, Terre Taute, Ind.
David A. Brotherton, Jr., Burlington, N. J.
Ed Moran, Elroy, Wis.
Harold Dressler, Ridgefield Park, N. J.
Roy Manning, Galax, Va.
Joe Deysenroth, Colfax, Wash.
Morris Josephs, Leonardo Community Fire Company, Middletown Township, N. J.
Frederick W. Traegler, Princeton, N. J.
C. J. Fish, Oakdale, La.
Fred Havecker, Little Ferry, N. J.
George W. Muttart, Rutherford, N. J.
Paul Hagenlock, Custer, S. D.
M. H. Koch, Mayville, N. Y.
P. B. Bowers, Alexandria, Minn.
Rocco Mirgalia, Dumont, N. J.



The Hardie is a big, strong vertical crankshaft driven pump built for sustained high pressure. The Hardie Imperial LCXA (at left) delivers 60 gallons per minute at 800 P. S. I. The Hardie Imperial XCXX delivers 35 gallons per minute at 800 P. S. I.

800 P. S. I.



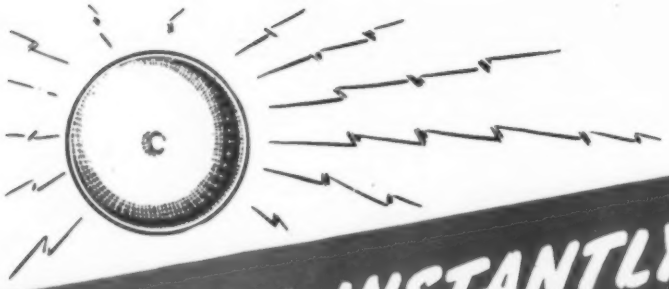
● The amazing fire control efficiency of a fog blanket depends squarely upon the pump and the gun. The pump must be able to deliver 800 P.S.I. at the nozzle for long sustained periods. The gun must be properly engineered and constructed to produce a true fog—or an intermediate spray, or a hard driving stream — whatever the situation calls for, instantly, when needed.

Because Hardie pumps and guns meet these requirements easily and completely they are standard equipment in Fog Fire Trucks of leading fire control equipment builders and are specified for modernization of old style trucks. Write for specification data.

THE HARDIE MANUFACTURING COMPANY
Los Angeles, Calif. HUDSON, MICH. Portland, Oregon
Canadian Distributor . . . C. W. Lewis, Grimsby, Ont.
Export Department . . . Book Tower, Detroit 26, U.S.A.

★H★A★R★D★I★E

High Pressure **PUMPS AND FOG GUNS**
for Fog Fire Fighters



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that's the Scott Air-Pak

SELF-CONTAINED BREATHING APPARATUS

The moment the alarm is given—be it a Fire Gong—a Mine Disaster—an Underwater Tragedy—an Industrial Emergency—the Scott Air-Pak is *READY* for instant use.

Donned in less than a minute, the Air-Pak is ready for rescue or protective duty—immediately. No lengthy make-ready time while precious minutes elapse.

And its fresh, cool air gives confidence to the user.

Distributed by leading Safety Equipment Houses from Coast to Coast.

NO OTHER BREATHING APPARATUS HAS ALL THESE VITAL ADVANTAGES

1. A quick-connect that cannot be cross threaded easily and quickly engaged.
2. All-purpose working equipment—not just rescue apparatus.
3. A regulator—proved by thousands of hours of usage.
4. Fresh, cool air—not oxygen.
5. No complicated training or practice needed.
6. Absolutely clear lenses—no fogging.
7. A gauge *specifically designed* to provide a constant check on available air supply under all conditions.

Bureau of Mines Approval No. 1308

...BREATHE FRESH, COOL AIR IN EVERY BREATHING HAZARD

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORP.

215 ERIE STREET, LANCASTER, N. Y.

Established in 1932

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FOR SAFETY—FOR SERVICE

"THERE CAN BE NO COMPROMISE WITH QUALITY WHEN A LIFE IS AT STAKE"

Frank Luba, Perth, N. Y.
Harry H. Whetsel, Mount Pleasant, Pa.
Algot Anderson, Argyle, Minn.
Harry Wahl, Harmony, Minn.
Roy Miller, Earlville, Ia.
Lawrence Gardner, Cambridge, Ia.
Louis A. Cole, Peekskill, N. Y.
Louie Sachau, Violin, S. D.
Bert Kingma, Knoxville, Ia.
Joseph Henry, West Harrison, N. Y.
Nelson Anderson, Cos Cob, Conn.
Fred W. Brooks, Windsor, Conn., Fire District.
Albert Clark, Hall, N. Y.
Andrew Lawrence, New City, N. Y.
Dale Solze, Green Springs
Terence McLinsky, Hempstead, N. Y.
Nathan J. Webster, Menomonie, Wis.
James Mershon, Sayreville, N. J.
Hector LaGarde, Bridgewater, Mass.
Richard Morris, Slatington, Pa.
Robert Clayton, Woodlawn, Ohio.

Retirements

Charles Yops, Chief of the Fort Plain, N. Y., Fire Department, retired in December. First Assistant Chief Earl Adams is acting chief until a new chief is selected.

Charles R. Thayer, since 1943, Chief of the Norwich, Conn., Fire Department, retired in December. He succeeded to the office on the death of former chief Louis Brookins. The new chief is reported to be Fred O'Neill, formerly first assistant.

World Wide Fire News

By Roi B. Woolley

Atomic Bomb Casualties Recover

The last death directly traceable to the atom bombing of Hirishima and Nagasaki in August, 1945, occurred in October, 1945, and everyone seriously wounded had recovered by last April it was announced last month by Col. Crawford F. Sams, Chief of Allied Headquarters Public Health Welfare Section.

Announcement also was made of the result of the studies conducted by the five-man atomic bomb casualty commission concerning the bomb's effects on humans.

"The effects," Col. Sams said, "including hair loss and great reductions in the number of white corpuscles, appear to have passed." The commission noted that bomb burns resulted in unusually large and disfiguring scars, known as keloids resulting from overproduction of scar tissue. The commission plans to make a special study of the bomb's effects upon life span, fertility and disease patterns. Col. Sams said that births since the bombings have not shown more abnormalties than were usual and added that persons burned appeared to have no unusual pains although some complained of itching in the scarred portions.

* * *

Fatal Dutch Munitions Blast

A heavy explosion in the little industrial village of Muiden, near Amsterdam, Netherlands in January, caused the death of sixteen persons and injuries to many more. The blast is believed to have occurred during the unloading

Where minutes count...

You need dependable, *easy-to-handle* fire hose.

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- Engineered to resist corrosion.

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FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN

munitions at an arms depot when a hand grenade accidentally dropped. The initital blast set off additional explosions and the detonations shattered windows twenty-five miles away. Every house within a square mile of the depot was badly damaged.

* * *

Germans Flew Over U. S. in War

The Germans did fly over the United States, it was disclosed during the formal opening of the Boston Optical Research Laboratories, in December, last. The Nazi flight was an air reconnaissance over cities of the Atlantic seaboard, including Boston and New York, in 1943.

According to Lieut. Col. Richard Leghorn, the flight was made in a modified Focke-Wulf 200 from an airfield in France. The information is reported to be based upon documents captured after the Nazi surrender.

* * *

Rocket 111 Miles Up Tests Gravity

Scientists have been studying the results of hurling metal slugs from a rocket traveling 3,647.72 miles an hour, 111 miles above the ground, hoping some of the pieces may have been thrown outside the earth's gravity and open the secrets of travel between planets.

The captured German rocket was launched from the U. S. Army's White Sands proving ground in December. In five minutes and five seconds it had reached top speed and altitude, higher than any previous 16 rockets fired by the U. S. Army.

The scientists' hopes were disclosed by Dr. Fritz Zwicky, 48. "We first throw a little something into the skies," Dr. Zwicky said, "Then a little more, then a shipload of instruments—then ourselves," adding that the December rocket-launching was the "little something."

* * *

Mystery Missile Falls on Oregon

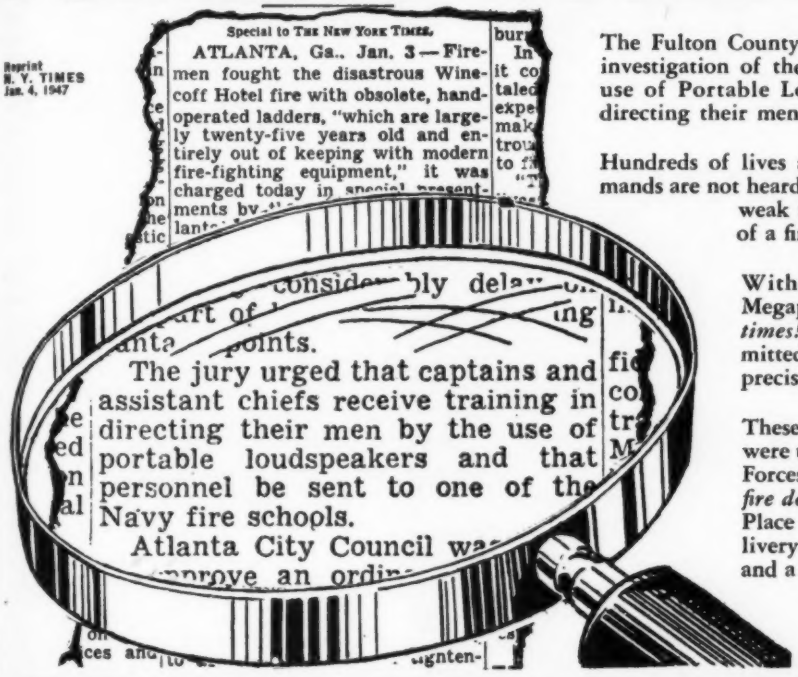
Whether or not the mysterious missile which fell in Oregon during an ice-shower early in January of this year had any connection with the above described rocket flight—or other trials of military missiles conducted by the U. A. Army at White Sands is being studied by military and other government experts. A laboratory analysis of the cylindrical object which fell from the skies established the substance as a refractory material similar to the lining of great rockets, press reports stated.

According to Dr. John E. Allen, geologist, the substance was not concrete, as it appeared, but contained elements to give reasonable basis for the hypothesis that it could have been used in rocket construction. The analysis, however, did not show the concentration of elements that would unquestionably establish its use in connection with rockets such as the Army's V-2 experiments at White Sands or in the Mohave desert in California.

In mentioning the possible connection of the object with U. S. military missile tests Dr. Allen added that "nothing has ever been said about the landing places of rockets which have been reported going north over Sweden. This might have something to do with the phenomenon. He said that the material of the missile contained aluminum, titanium, magnesium, chrome and zircon.

The largest portion of the object was taken over by an Army investigator for

GRAND JURY URGES PORTABLE LOUDSPEAKERS



Reprint
N. Y. TIMES
Jan. 4, 1947

Special to THE NEW YORK TIMES.

ATLANTA, Ga., Jan. 3 — Firemen fought the disastrous Winecoff Hotel fire with obsolete, hand-operated ladders, "which are largely twenty-five years old and entirely out of keeping with modern fire-fighting equipment," it was charged today in special presentments by [illegible]

The jury urged that captains and assistant chiefs receive training in directing their men by the use of portable loudspeakers and that personnel be sent to one of the Navy fire schools.

Atlanta City Council was [illegible] approve an ordin[illegible]

The Fulton County (Atlanta) Grand Jury, in their investigation of the Winecoff Hotel fire, urged the use of Portable Loudspeakers by fire officers in directing their men.

Hundreds of lives are lost every year because commands are not heard. Unaided, the human voice is too weak to rise above the din and turmoil of a fire.

With Guided Radio Portable Electric Megaphones* *the voice is amplified 2500 times!* Lives are saved, commands transmitted with clarity and obeyed with precision.

These same powerful megaphones that were used by our Navy and Amphibious Forces are now standard equipment in *fire departments* in many leading cities. Place your order NOW for early delivery. Fill out the coupon for literature and a demonstration.

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examination. The three-inch-long piece, with a dab of silver-like paint, was coated with ice when it is said to have fallen during an ice shower.

* * *

W. A. A. Stages "Baby Bikini"

The War Assets Administration staged a "baby Bikini" in January to destroy ten tons of metallic sodium in the salty waters of Lake Lenore, Wash. It was a great show, but the public was asked to stay away because the exact reaction of water on such a large quantity of sodium was unpredictable.

Six large kettle-like drums were rolled into the lake from a 100-foot cliff. The first broke through the foot of ice on the lake and immediately started a heavy and rapid cannonading. Fiery pellets cascaded up from the drum, making it appear that the water had caught fire and erupted. Above the bright red cascade a pure white column of smoke mushroomed into the air for 1,000 feet twice as high as the 500-foot cliffs bordering the lake, visible eight miles away at Soap Lake. As darkness fell, two of the drums were still active at intervals.

The acrid smoke from the sodium left a deposit on the skin of watchers, causing an irritation like chapping, and also was deposited on cars near the lake.

The sodium was destroyed because it was too dangerous to transport to the East for industrial use.

* * *

More About Jap Firemen—

Last month we told about a parade of Jap firemen and said they were "no ball of fire." Now comes more evidence to prove it!

On January 15, Tokyo's smoke eaters staged their first post-war fire department day—a gallant show (says the report) "winding up with the firemen demonstrating how (not) to fight fires."

Two shacks were destroyed by flames "despite the tons of water the firemen sprayed AT their targets and ON spectators." It was a great show, despite the venerable engines, some twenty-nine years old, leaking nozzles and hoses.

All of Tokyo's fire engines were paraded through the Imperial Palace Plaza and past a reviewing stand on which stood booted, spurred Police Inspector Minoru Suzuki, who also gives orders to the firemen. Then volunteer firemen had their moment. Equipped with split-toed, rubber-soled canvas shoes and kimonos that flared widely in the brisk, chill wind, they swarmed atop thirty-foot bamboo ladders where they put on an aerial trapeze and acrobatics act.

The regulars followed with pseudo-militaristic calesthenics, goose-stepping down the parade ground to a chant barked by their leader. The climax came when fires were started in small shacks built atop two forty-foot towers covered with evergreen branches. Despite valiant efforts, the firemen couldn't get the water up to the shacks (but they did manage to wet down the audience).

"If we leave them alone, the fires will go out," consoled an official. They consumed the shacks—and went out.

P.S. Fire losses in Tokyo average nearly $10,000,000 annually, according to reports.

Fire Losses Highest in 20 Years

Destruction by fire in the United States neared record levels during 1946, with total losses estimated at $561,487,000, an increase of 23.3 per cent over losses of $455,329,000 in 1945, it was announced by W. E. Mallalieu, general manager of the National Board of Fire Underwriters.

The 1946 losses, the highest in 20 years, approached the highest figure ever recorded in the U. S., $561,980,751 in 1926.

Losses during December, 1946, set a new record for a single month. They were estimated at $58,094,000, an increase of 30 per cent over November, 1946, and 17.4 per cent over December, 1945, and were the highest recorded since the National Board began tabulating losses on a monthly basis in 1929.

Fire losses during the past 12 months were:

January	$49,808,000
February	51,759,000
March	53,252,000
April	52,153,000
May	46,094,000
June	44,240,000
July	40,998,000
August	40,019,000
September	40,256,000
October	40,108,000
November	44,706,000
December	58,094,000
	$561,487,000

The estimates are based on incurred losses reported to the National Board by member companies, plus an allowance for unreported and uninsured losses.

Built to exacting requirements—to fire department specifications. . . . Designed to stand up under the hard usage and difficult conditions a Fire Department Portable has to meet! In service with leading fire departments, these rugged 1500 watt Units have *proved* themselves capable of meeting every emergency.

Dependable. **Quick-starting 4-cycle engine. Positive lubrication.**

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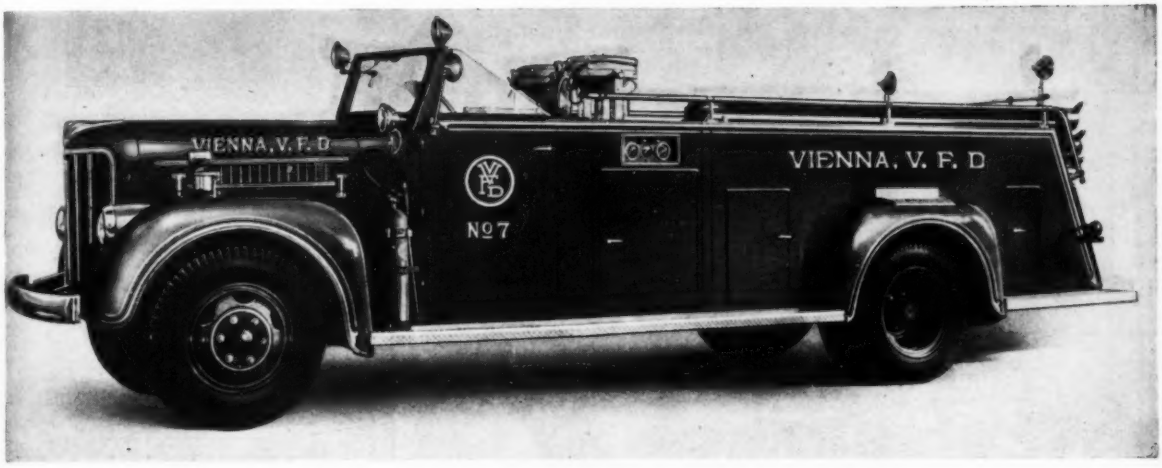

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Manufacturers' Announcements

American-La France Makes Promotions

The American-LaFrance-Foamite Corporation, at a regular meeting of the Board of Directors held in December, elected James O. Binford, Wilfred M. Price and Alexander G. Long, Vice-Presidents of the Company, and Mr. Binford and Mr. Price to membership on the Board of Directors.

Gudd J. Halpin was appointed General Sales Manager, and Miss Rose E. Donaldson, who for several years has been functioning as Assistant Motor Apparatus Sales Manager, was appointed officially to that position.

In the new set-up, each Division of the Company now has representation on the Board, as follows: Clarence A. Pettyjohn, Vice-President and Treasurer; William M. Cooper, Vice-President and Secretary; Edward D. Herrick, Vice-President in charge of Manufacturing; James O. Binford, Vice-President in charge of Sales; Wilfred M. Price, Vice-President and Assistant to the President.

The remaining members of the Board of Directors are: Edward E. O'Neill, President, American-LaFrance-Foamite Corporation; Wm. E. Ransom, President, MacAndrews & Forbes Company; W. W. Walker, Vice-President, MacAndrews & Forbes Company; Alex. D. Falck, Honorary Chairman of the Board, Corning Glass Works; Clifford Hemphill, Partner, Hemphill, Noyes & Co.; George W. Mixter, Partner, Day & Zimmermann.

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ROANOKE, VIRGINIA

General Detroit Opens New Branch

The opening of a new Atlanta factory branch and warehouse of The General Detroit Corp., manufacturers of fire extinguishers, motorized fire apparatus,

E. A. Warren

and allied equipment, is announced by E. A. Warren, Vice President in Charge of Sales. The new office is located at 285 Spring Street N. W., Atlanta 3, Georgia. J. H. ("Jack") Gaines has been appointed Southeastern Regional Sales Manager in charge.

The Atlanta office will serve the states of Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee, providing them with the same expanded service now being supplied by General's other regional offices in New York, Philadelphia, Chicago, Dallas, and Detroit.

New Generating System Keeps Battery Charged

A new kind of A-C generating system, featuring a novel application of an alternator, has been developed by The Leece-Neville Company, Cleveland, for six- and 12-volt service on all types of mobile equipment requiring extra-high current output at low and high speeds to maintain batteries.

Need for such a system, according to the company's engineers, was first voiced by police departments. In police cruisers carrying two-way radio, flasher lights, sirens and other electrical accessories, ordinary generators have been found incapable of delivering sufficient current to maintain batteries without frequent recharging. The under charging accentuated by the Cruisers' frequent use of accessories while standing still or moving at very slow speeds, caused many police departments to install freshly charged batteries every day.

The six-volt Leece-Neville system originally developed to solve this problem has proved so successful, the company reports, it has already been adapted to many other applications. Foremost of these is fire department vehicles.

Chief advantage claimed for the system is its ability to deliver 25 to 35 amperes at engine idle speed, and 60 amperes from 12 to 15 miles per hour to top car speed. Based on observation of actual installations and results of laboratory tests, Leece-Neville states that this new generating system can practically eliminate the need for recharging when installed in connection with a battery in A-1 condition.

Consisting of alternator, voltage regulator and rectifier, the system weighs 40 pounds, which is somewhat less than conventional D-C equipment of comparable output. The Alternator is of

simplified design, having no commutator or rotating armature windings.

The 12-volt version of this new system weighs 42 pounds, which the maker states is 60% less than the weight of comparable D-C equipment.

When the correct drive ratio is provided, the 12-volt equipment delivers 100 amperes at engine idle speed as well as at full engine speed. There is no danger of burn-out because the alternator has no commutator. Rotation can be reversed without affecting system connections or performance, and the system can be used for series parallel circuits where 24-volt cranking is required.

Employed on equipment with radio, two-way radio, or the new individual radio-telephone, both six- and 12-volt systems are reported to hold radio noise to an absolute minimum, due to the absence of commutation and brush sparking in the alternator. By keeping batteries in fully-charged condition, the systems eliminate "fade-out" and range reduction problems and tend to extend the life of radio equipment.

Demand for both the six- and 12-volt systems has increased steadily.

A booklet describing the operation of both systems in detail has just been produced and is now available from The Leece-Neville Company, Cleveland 14, Ohio.

False Alarm Senders Trapped

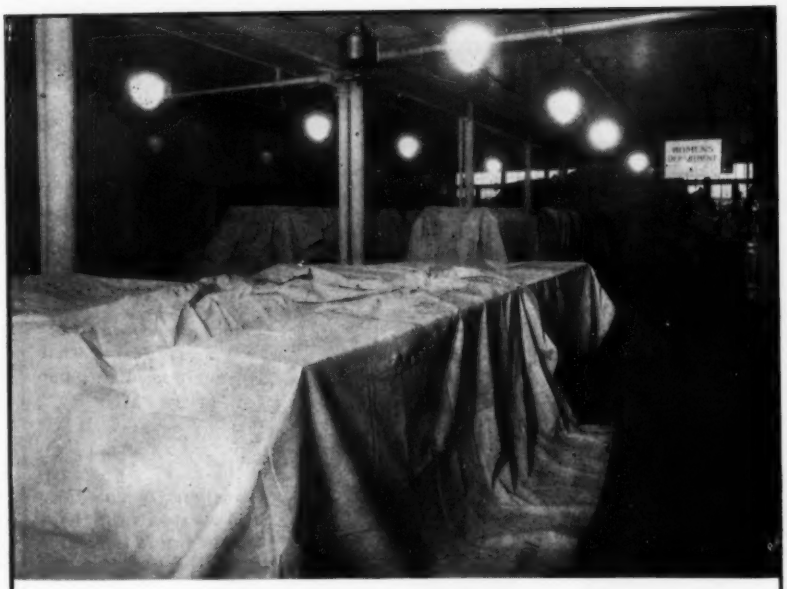
The Fire Marshal's office in the City of Portland, Oregon, has compiled a fine record in the last two years by apprehending a good percentage of the persons who have turned in false fire alarms. The Fire Marshal's office and the Fire Alarm office combined their efforts in these apprehensions.

The City purchased a black light from the Ultra Violet Products, Inc., of Los Angeles, Calif., and fluorescent powder from the Switzer Bros., 1220 Huron St., Cleveland, Ohio. This powder was then mixed with lanolin oil. This oil was chosen after several tests, because it closely resembles the oil of the human hand and would not harden in cold weather. This mixture was then placed on the levers of all fire alarm boxes in the city. Since this powder has been in use, the investigators have arrested seven adults, and several children have been picked up, but were turned over to the juvenile or school officials.

The investigation staff has found that this is a practical method of capturing the false alarm artist. One man who was picked up near an alarm box steadfastly denied that he had turned in the alarm. He was taken to the police station, and was told that all boxes were treated with a fluorescent, green powder and that the only place he could get it on his hands was from the alarm box. When the black light was turned on his hands and the powder was very visible he said, "What in heck will you fellows think of next." He pleaded guilty and was sentenced to 180 days in jail and fined $500.—NORMAN HOWARD, Fire Investigator, Portland, Ore.

Canadian Fire Losses Were Higher in 1946

Fire losses in Canada during 1946 aggregated $59,081,955, compared with $41,903,020, a preliminary estimate, which will appear in the next issue of Monetary *Times*, reveals. The 1946 figure includes an allowance of $12,000,000 for unreported fires.



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Fire chiefs all over the country are setting records for low fire losses by using Shuredry Green-Bak Salvage Covers, tested and passed by the National Board of Fire Underwriters and by Factory Mutuals Fire Insurance Association.

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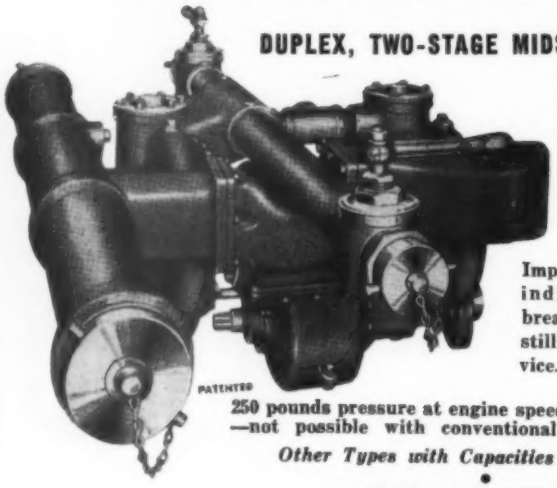

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HAMBURG, PA.

The Round Table

(*Continued from page* 102)

In my opinion no department of public safety should make a charge for their service. I believe that by charging a fee for certain services rendered would have a tendency to cause hesitation and delay in calling the fire department for information, inspections, etc.

Most people feel that the firemen's salary is sufficient compensation for the regular fire department work that he is called on to do while on duty.

* * *

The following is in answer to a previous round table on the use of fire police.

Archie H. Hess, Chief, Waverly, N. Y.: In Waverly we have a separate company of twenty uniformed men. This company was chartered in 1877 with twelve men. Their average weight was 192 pounds. They grew big in those days.

They are sworn in as regular police officers, and have the same powers. The captain of this company has an alarm bell from the alarm circuit, and answers all alarms with ambulance fully equipped (at his own expense). The fire police regulate traffic, arrest auto drivers that get too close to fire equipment, stretch ropes to protect property, etc. They are used on special occasions, such as at the theatre when children are in attendance, or on days when the crowd might cause panic.

On Hallowe'en night we place the fire police on duty to see that the fire alarm boxes are left alone. This has proved very satisfactory in the past, as we have had no false alarms on this night.

I think any town would find the fire police very useful in a great many instances, as it would be assured of help at fires or at any emergency requiring men with authority.

C. J. De Fields, Chief, Windsor, Ont.: I am somewhat at a loss to know just what you mean by fire police. I will try and give you some idea of the relationship of the fire and police departments of this city.

Quite a number of firemen are sworn in as special police officers. Their jurisdiction does not extend outside the city limits. They have the same authority as any other police officer and can make an arrest for any offence. However, they do not generally exercise this authority except as it might apply to fire inspection of arson or other matters closely related to fire department activities. The police authority is of considerable help in investigating matters coming under this heading. We also have a police detective attached to this department whose work is principally the investigation of suspicious fires. He works in cooperation with the chief fire inspector of the department. Through the efforts of these two men three arson gangs have been broken up in the city during the past year. This man also investigates false alarms and prosecutes the guilty party when apprehended.

I think the plan of having a city detective attached to the department for this purpose is a good idea as it has paid dividends in our particular case.

Firemen detailed as special police officers also has its advantage in that they can exercise their authority in controlling crowds and vehicles during the progress of a fire.

Ben J. Zahn, Chief, Ann Arbor, Mich.: The City of Ann Arbor does not have any employees who have the title of "Fire Police." Our police are strictly police, and our firemen, strictly firemen. Our fire department gets very fine cooperation from the police when we need them at a fire, and when they have any occasion to need our assistance, they get it also.

W. G. Smilie, City Fire Marshal, Monmouth, Ill.: We have fire police in our city. They are both volunteers and paid men. They have full authority in enforcing the fire laws of the State of Illinois.

If these men are given the authority and are backed up by the city government, they can be of great help to the fire department at fires. They should also be given a badge, uniform or arm band so that they can be recognized by the public as officers of the law.

George H. Harper, Jr., Chief, Putnam, Conn.: We do not use fire police in our city.

I am very much in favor of fire police, however. They come in mighty handy in taking care of traffic and people, providing they are trained to whatever their duty may be. We used to have fire police, but a few years ago the police department was put on the merit system and by so doing, the fire department lost its fire police.

We are going to take a few firemen and train them for police duty at fires. They will come in mighty handy as we are hindered by traffic and sightseers who do not realize how much they interfere with the work of the fire department.

Walter L. Hydaker, Chief, Lima, Ohio: Our regular police furnish police protection at our fires and they do a very efficient job. In addition, they are more than willing to aid us wherever possible, and to the extent of helping on hose lines.

We find here at Lima that this procedure works very well as the police and fire departments are on the best of terms. The cooperation between the two departments is excellent, making a very good combination in case of a bad fire.

J. K. Piercey, Chief, Salt Lake City, Utah: We do not have fire police in Salt Lake City. However, our police department cooperates closely with us, and our facilities are so arranged that an alarm of fire is received at the police radio station at the same time that it is announced over the loud speakers in our fire stations. The police dispatcher then sends radio patrol cars to the scene.

This system has worked out very satisfactorily in our city, in that we have had police assistance in handling traffic, in the apprehension of false alarmists and in other phases of our work. In one case a police radio car was travelling in the vicinity, got dispatch orders to respond to a box alarm and arrived ahead of the fire engines. On the alert for false alarmists, the policemen in this car apprehended two boys before they could leave the scene.

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Safeguarding begins with the selection of raw materials and continues through the rigid inspection during the process of manufacture and is still present with the final testing to which every foot is subjected.

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New-Lined Rubber Coats, very pliable, equal to pre-war—sizes 40 to 50—$13.93 each, postage paid anywhere in U. S. A. Doray Fire Equipment Co., 1924 Valley Drive, Syracuse 7, N. Y.

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FIRE HOSE in 50 ft. lengths, 1½ Inch, double jacket, cotton, and rubber lined, with brass couplings. Standard Pipe thread. Mfg. by B. F. Goodrich. 400 lbs. tested. Brand new and fresh. Navy Surplus. Only $12.50 per length. Halprin Supply Co., 140 E. 2nd St., Los Angeles 12, Calif.

FOR SALE

Palm Fiber Fire Broom. The Best "Fire Fighter" for Field Fires. Selected for its flexing and fire resisting qualities. Metal bound at head. Unexcelled for sweeping field fires. Made by the makers of the original fire broom. No. 62F Palm Fiber Fire Broom in lots of six or more, each $1.50. S. Ervin Diehl, Jr., 1229 N. Second Street, Philadelphia 22, Pa.

FOR SALE
EXTINGUISHER SPECIALS

2 lb. CO-2, $16.00 ea.; 4 lb., $8.00; 15 lb., $20.00 ea.; 2½ gal. Foams, $10.00; 3½ gal. Wheeled C-T, $35.00. 1 Foam Generator—Hopper Type, 2½ inch line, $35.00. All in A-1 Condition—New Red Finish—FOB—Less Charges—Limited Stock. Fire Extinguisher Service, Box 257, Warrenton, Virginia.

FIRE ENGINE WANTED

Fully-equipped fire engine, complete truck type, wanted for town of 8000 population. Send pictures, specifications and price by air mail in earliest possible letter. No objection to used equipment providing in excellent condition. Larder Motors, Larder Lake, Ontario, Canada.

FOR SALE
PACIFIC PORTABLE PUMPS

For prices and information write
Blanchard Associates, Inc.
Cambridge 39, Mass.
Eastern Distributor

Providence Has Spectacular Fire

A thirteen-hour, three-alarm fire in the plant of the Warehouse Realty Company, Union Avenue, Providence, R. I., on January 23, virtually destroyed the three-story structure, with a loss estimated at $350,000.

The fire, of unknown origin, started in the premises of the Calco Company, manufacturers of artificial pearls on the second floor and spread rapidly to involve the building. The top floor is occupied by the National Biscuit Com-

INDEX FOR 1946

The index, covering the twelve issues of Fire Engineering for 1946 is now ready for distribution.

Your copy will be mailed free upon request.

pany and the ground floor by the Eastern Nail Company.

The first alarm was turned in at 3:07 A.M. from a nearby box and when firemen arrived much of the interior was already in flames. A second alarm was sounded by Deputy Chief Harry McElroy, bringing Chief of Department Thomas Cotter, who had been at home, ill. The latter transmitted a third alarm and the city's air-raid sirens, still in use, summoned off-shift firemen and police, Red Cross emergency units and other aid.

During the early part of the fire, soon after ladders had been thrown against the structure, there were heavy explosions of lacquer, gasoline and chemicals. One such blast nearly caused death or injuries to a fire crew on a ladder (see the cover illustration in this issue). Two companies, operating on the roof, had a narrow escape when they fled, on imperative orders of Chief McElroy, sliding the ladders as the roof went in.

The only fireman seriously injured was Lieutenant Frank Hodgson of Ladder 2, who received multiple cuts.

I.A.F.C. Board of Directors Meet

(*Continued from page* 100)

ence Meek, Mack Manufacturing Company, New York; E. J. McCarthy, General Sales Manager, The Gamewell Company, Newton Upper Falls, Mass.; Percy Bugbee, General Manager, National Fire Protection Association, Boston, Mass.; W. A. Ross, U. S. Department of Education, Washington, D. C.; Hugh McNair; William H. Stephenson; Truman Young, Pyrene Manufacturing Co., Newark, N. J., and L. L. Lowry, The Gamewell Company, Newton Upper Falls, Mass.

Hotel Fire Safety Report

(*Continued from page* 89)

in every other respect such hotels shall conform to recommendations 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 19, 20, 21, 22 and 23 of main report.

B. Existing hotels four or more stories in height containing more than twenty and less than fifty rooms of fire resistive construction shall have all stairs, elevators and other vertical openings protected with enclosures considered standard for that type of construction and in other respects conform to recommendations 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 19, 20, 21, 22 and 23 of main report.

C. Existing hotels four or more stories in height containing more than twenty and less than fifty rooms of ordinary construction shall comply with the provisions contained in recommendation A of Addendum.

D. Existing hotels two and three stories in height containing more than fifty rooms shall be of fire resistive construction or required to comply with the

DUAL FIRE FIGHTER

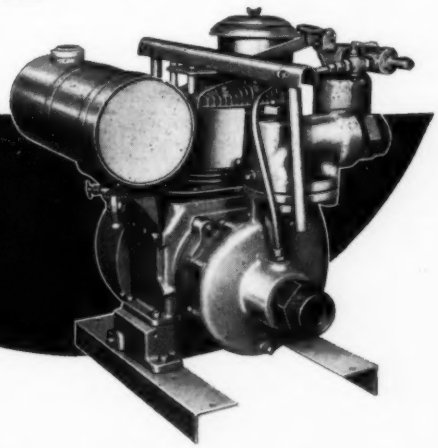
fights fires direct - or relays water to pumper

This handy little Gorman-Rupp pump is sometimes nicknamed the "DO-ALL" because of the many purposes for which it may be used. It is a valuable addition to any fire fighting equipment.

The Dual Fire Fighter may be used as a booster pump, relaying water to the truck pumper when water supply is inaccessible to the large truck. It is easily and quickly carried to the lake or stream by two men (it weighs only 155 pounds) and within 15 to 30 seconds, by means of a simple exhaust priming device, water starts flowing through the hose lines. Used for relaying water to the pumper, it will deliver 175 gallons over a 30 to 50 foot hill through 300 feet of 2½ inch fire hose.

It is equally valuable for fighting fires direct as it will throw 100 gallons at 70 pounds or 80 gallons at 80 pounds pressure.

Used for dewatering purposes, it will save the expensive truck pumper from possible costly damage. Any damage to the Dual Fire Fighter is quickly and easily repaired with common tools.



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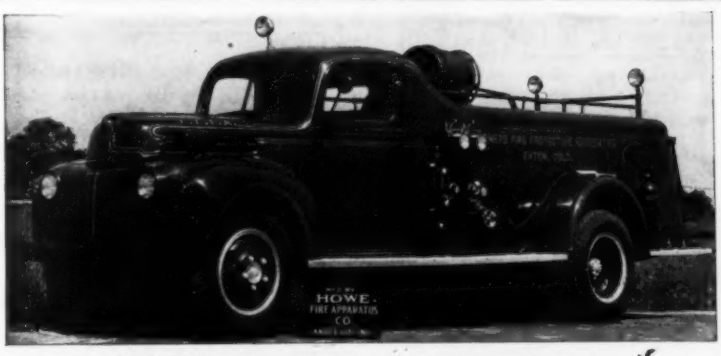
BOWMAN STREET • MANSFIELD, OHIO



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HOWE FIRE APPARATUS CO. Established 1872 1402 West 22nd Street Anderson, Indiana

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and Pipe Line Accessories

Write for Catalog 40

Above Tapping Sleeve and Valve are used to tap a main under pressure for a branch to automatic sprinklers, fire hydrants, etc. Cut-in may be made without interrupting water service.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or, with sliding stem and lever. Also furnished hydraulically operated. Square bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

MILL YARD HYDRANTS
Underwriters Approved

We manufacture A.W.W.A. standard hydrants and also Mill Yard Hydrant shown at right, the latter giving individual control of each outlet. Dry top, revolving head, easy to lubricate, high efficiency because barrel diameter not reduced and no working parts or obstructions in waterway. Special Traffic Model A.W.W.A. hydrant designed to yield at ground line under impact.

Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

provisions of recommendation A in Addendum and in addition, recommendations 10, 11 and 12 in main report.

Butadiene

(*Continued from page* 96)

60 per cent of its lower explosive limit will sound an alarm, while indicating by flasher lights the location of the leak. If the gas concentration rises higher, resulting vapor will be ignited by an automatic spark. This increase in temperature affects the heat actuators accordingly, so that the water fog units are released, emitting columns of water fog which completely envelope the fires.

This, of course, instantly divulges source of the leak, so that repairs to the gas line can be made.

Convention Dates

Mar. 19—FIRE CHIEFS EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting. Secretary, Chief Edward H. Carney, Fire Headquarters, Chappaqua, N. Y.

Apr. 22-25—TRAINING COURSE IN ARSON INVESTIGATION AND DETECTION. Third annual meeting. Purdue University, Lafayette, Ind. Director, Professor J. L. Lingo, Indiana Fire Service Training Schools, Purdue University, Lafayette, Ind.

May 3-4—NORTHERN CALIFORNIA FIRE CHIEFS ASSOCIATION. Annual meeting, Hobergs, Cal.

May 6-8—PRESIDENT'S CONFERENCE ON FIRE PREVENTION. National conference. Washington, D. C. General Chairman, Major General Philip B. Fleming, U. S. Army, Federal Works Agency Building, Washington, D. C.

May 20-23—IOWA FIRE SCHOOL. Annual meeting, Marshalltown, Ia. Director, R. C. Byrus, Fire Protection Engineer, Iowa State College, Ames, Ia.

June 18-20—MARYLAND STATE FIREMEN'S ASSOCIATION. Annual meeting, Frostburg, Md. Secretary, B. R. Benson, 303 Bosley Avenue, Towson 4, Md.

July 28-Aug. 1—PENNSYLVANIA FIRE SCHOOL. Ninth annual meeting, Lewistown, Pa. Director, Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Harrisburg, Pa.

Aug. 16—BALTIMORE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual convention, Lutherville, Md. Secretary, W. A. Chenowith, Milford Road, Pikesville 8, Md.

Aug. 19-22—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Hotel Pennsylvania, New York, N. Y. Secretary-Treasurer, Chief Daniel B. Tierney, 8 Robbins Road, Arlington 74, Mass.

Sept. 23-26—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual meeting, Hoberg's, Cal.

Sept. 29-Oct. 2—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Grand Rapids, Mich. Secretary, Irvin Shulsinger, 8 East 41st Street, New York 17, N. Y.

Send in Your Meeting Dates

As a service to its readers FIRE ENGINEERING endeavors to maintain an up-to-date list of all county, state, regional and national organizations and associations in the fire service, and the dates on which their annual conventions are to be held.

Officers of associations are invited to forward the editors, at the earliest opportunity, the roster of association officers, and the dates (actual or approximate) on which conventions are scheduled.

This information will be listed under the heading "Convention Dates."

BRAXMAR BADGES

Standard for over 67 years

THE BEST BADGE MONEY CAN BUY

BRAXMAR BADGES STANDARD WITH FIREMEN FOR 67 YEARS—WE CAN NOW SUPPLY NICKEL AND CHROME.

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President

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What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of January, 1947.

Cotton Plant, Ark.—Panel Mill, Southwest Veneer Co. destroyed, including large quantity finished woods and several pieces of newly delivered equipment.
Calgary, Alta.—Plt. of Western Gypsum, Ltd., destroyed. Short circuit.
Broadus, Mont.—Star Theatre destroyed. Faulty furnace.
Vancouver, B. C.—Seaview School in Kitsilano district destroyed. Arson.
Kansas City, Mo.—Brookside Theatre bldg. damaged.
East Texas, Pa.—Barn on William Seem farm destroyed. Gasoline explosion.
Albany, N. Y.—Whse. and office bldgs., waterfront section, occupied by Colony Liquor Distributing Co. and John Vogel Trucking Co., damaged.
Jeffersonville, Ind.—Bldg., downtown section, occupied by three stores and four offices, damaged.
Bar Harbor, Me.—A. B. and J. R. Hodgkins Co., woodworker, destroyed.
Boston, Mass.—Wit Bldg., waterfront, destroyed.
West Springfield, Mass.—Grandstand and paddock of West Springfield dog track destroyed.
Belding, Mich.—Business block occupied by John Wheeler clothing store; Hall & Cichy furniture store; shoe repair shop of Wilford Bideau; and Frank Five- and Ten-Cent Store, damaged.
Kinston, N. C.—Davish Mill, Moss Hill township destroyed.
Cincinnati, Ohio—Dr. Heinz New Wayfeed Co. plt. destroyed. Este Oils Co. damaged.
Loudonville, Ohio—Flxible Co., mfrs. of buses and funeral cars, damaged. Paint dryer caused blast.
East Providence, R. I.—Louis Goldstein cleaners damaged Safe crackers started fire.
Clarksville, Tenn.—Laundry and barracks bldg. at Camp Campbell damaged.
Snohomish, Wash.—Kimball dept. store, Putnam jewelry store, F. M. Evans real estate, destroyed.
Huntington, W. Va.—Fix-It Shop and two adj. establishments, damaged.
San Francisco, Cal.—Five-alarm fire along waterfront destroyed interior of Hanford Bldg. on the Embarcadero. Arson suspected.
Fort Worth, Tex.—Birdville high school damaged. Faulty gas heater.
Chatham, Ont.—Chatco Steel Products plt. destroyed. Tank of naphtha gasoline exploded.
Los Angeles, Cal.—Ella Campbell St. Donat's Restaurant destroyed.
Miami, Fla.—Florida Rubber Corp. damaged.
Davenport, Ia.—Snug Harbor Club of American Legion Post No. 26, damaged.
Jefferson, Ia.—Hird and Cudahy implement office and whse. destroyed.
West Quincy, Mass.—Air Reduction Sales Co. destroyed. Explosion of acetylene gas tanks. Dwellings, half-mile radius, damaged.
Detroit, Mich.—Michigan Bleach & Chemical Co. damaged.
Montevideo, Minn.—Central bakery bldg., occupied by Ed's cafe, damaged.
McComb, Miss.—Summitt High School bldg. destroyed.
Tiptonville, Tenn.—West Tennessee Soya Mill and hardwood sawmill destroyed.
Chatham, Ont.—Drier of Kellogg's of Canada, Ltd., destroyed.
Palgrave, Ont.—Three bldgs. destroyed.
Wantagh, L. I.—Garage of Frank Fischer destroyed. Oil heater explosion.
Hillsboro, N. H.—Crosby block, occupied by sports shop, dairy company, jewelry store, beauty parlor, two apts. and American Legion hqts., destroyed.
Newark, N. J.—Asbestos Products Mfg. Corp. destroyed.
Weehawken, N. J.—Freight export Pier No. 3 of New York Central Railroad, quarter mile north of West Shore Railroad Passenger Terminal, destroyed. Adj. Pier No. 4 damaged. Igniting of gas formed when drum of carbide sprang leak and came into contact with water.
Albany, N. Y.—Inter-connected one-story bldgs. of Hynes & Cox Electric Corp. plt. Sparks from electric exhaust fan in paint room.
Londonderry, Vt.—Main plt. of Londonderry Products, Inc., banks of West River, destroyed. Bldg. across street occupied by post office, plumbing shop of Russell Brennan and apt. destroyed. Bldg. used for storage by Londonderry Products, Inc., damaged.
Vancouver, B. C.—Sawmill, Burnaby, destroyed.
Marion, Ark.—Marion Baptist Church destroyed. Overheated furnace.

VALUE . . .

Why do users of Hale Fire Pumps specify "Hale Pump" when they buy new apparatus?

Because these men have learned through practical experience HALE VALUE in terms of:

DEPENDABILITY
FLEXIBLE PERFORMANCE
HIGH EFFICIENCY

For 32 years Hale-equipped Fire Pumpers have upheld a high standard of dependability . . . a dependability that has won the respect of users all over the world.

That is one of the reasons why Hale Fire Pumps are sold only through manufacturers of quality apparatus.

FIRE PUMPS HALE CONSHOHOCKEN PA

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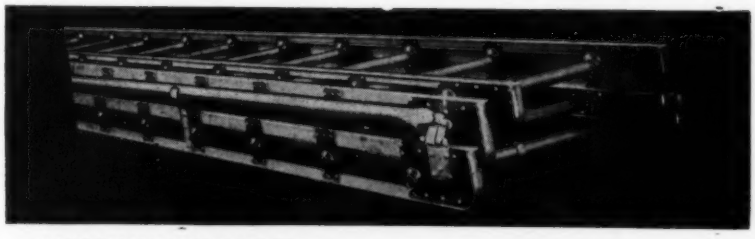
FIREMEN PREFER . . . Aluminum FIRE LADDERS



ALUMINUM IS LIGHT

When time is precious and manpower is at a premium, light-weight Aluminum Ladders are your most efficient life-saving and fire-fighting tools for they require fewer firemen to raise and operate them successfully.

ALUMINUM IS STRONG

Available in 1, 2, 3 and 4-section models, every Aluminum Ladder is heavily riveted and constructed of high-tensile-strength Aluminum Alloy. The corrugated rungs are securely fastened with aluminum expansion bushings, with the result that the rungs never become loose or break off.

ALUMINUM IS DURABLE

Practically all of the ALUMINUM FIRE LADDERS purchased since 1936 are still in use today. Being fireproof and rust proof they last longer than other types. Write for Complete Information.

"Original Manufacturers of Aluminum Ladders"

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200 Carbis Street
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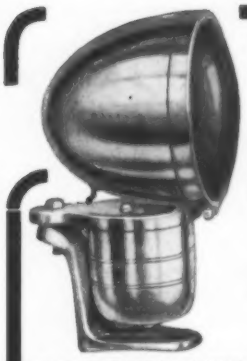

NOW, SPEED TO FIRES IN SAFETY WITH AN 06 MASTER-LIGHT!

Chief, let this light show you that "Wig Wag MASTER-LIGHTS" mean *faster, safer, quieter* runs! Powerful sweeping red beam warns traffic 1,000 feet ahead—clears way in any weather. Fixed lamp head cannot stick in snow or sleet. Effective even in daylight!

Clears Your Side of Street, Too

Write now for new free Fire Chief Folder illustrating MASTER-LIGHTS.

Send for free Folder NOW!

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200 Sidney St., Cambridge, Mass.

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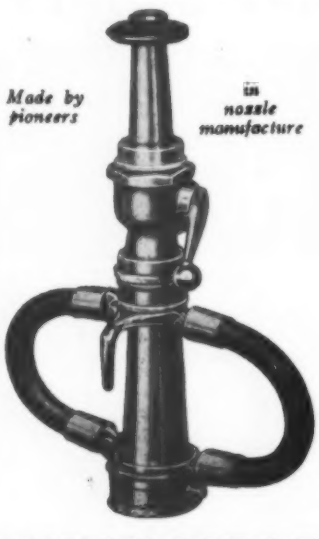
Made by pioneers in *nozzle manufacture*



INVINCIBLE NOZZLES

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 — 1945

Seattle, Wash.—Downtown office bldg. housing King County Welfare and Electrical Union hdqts. destroyed.

Truro, N. S.—Robert Simpson Eastern Ltd. Store destroyed; also adj. Royal Bank Bldg., law offices of Burchell, lumber offices of D. M. Smith and Success Business College.

Phoenix, Ariz.—Six barns on cattle ranch of Ray Cowden, near Tolleson, destroyed.

Groton, Conn.—Hotel Griswold garage, Eastern Point, destroyed.

Roxbury, Mass.—Junk yard destroyed.

Billings, Mont.—Automotive equip., Tongue River Agency, Lame Deer, destroyed.

Lewistown, Mont.—Business bldg. destroyed.

New Glasgow, N. S.—Garage of Graham and Fred Townsend destroyed. Adj. woodworking plt. and Bluenose Curling Rink damaged.

Napanee, Ont.—Chick hatchery, owned by M. B. Mills Co., destroyed.

Redding, Cal.—Whse. owned by Harry Fine, destroyed.

Lomita Park, Cal.—Gypsy's highway resort destroyed.

Denver, Colo.—Bldg. of Denver Federal Center destroyed.

Wilmington, Del.—Office, whse. and shop of Hilton Corp., Brack-Ex, damaged. Nearby dwelling of C. W. Harris, also damaged.

Quincy, Ill.—Mendon grain elevator destroyed.

Granite City, Ill.—Pointer Hotel and three stores, downtown section, destroyed.

Caribou, Me.—Bldg. occupied by Lloyd's Market and apts., grocery store of James Michaud, and Cyr's Taxi bldg., damaged. Defective wiring.

Gladwin, Mich.—Markle Super Market and Markle Feed Store, Schwager Five Cents to One Dollar Store and two apts. over feed store, damaged.

Syracuse, N. Y.—Plt. of Dunning & Boschert Press Co., Inc., mfrs. of presses used in wine and cider and plastic moldings, damaged.

Pawling, N. Y.—Dwelling of Lowell Thomas, South Quaker Hill section, destroyed.

Syracuse, N. Y.—Syracuse University's Archbold Gymnasium destroyed.

Cleveland, Ohio—F. S. Ingersoll, Inc., hardware store, suburban Rocky River, damaged.

Fayette, Ohio—Fayette Mfg. Co. plt., mfrs. of trailer parts, destroyed.

Pendleton, Ore.—Harris Pine Mills destroyed.

Greenville, Pa.—Dwelling of Thurman Peterson, Salem Township, destroyed.

Charleston, S. C.—Union Passenger Station destroyed.

Gallatin, Tenn.—Bldg. occupied by dry goods store of J. A. Claiborne, cafe of Russell Goad, barber shop, pressing shop, combination garage and livery stable, destroyed.

Dallas, Tex.—George Owens Lumber Co. destroyed.

Birmingham, Ala.—Plt. of Merita Bakery Co., southside, destroyed.

Bell, Cal.—Jim Dandy market destroyed.

Leicester, Mass.—Leicester Junior College main dormitory destroyed.

Portsmouth, N. H.—Universalists Church destroyed. Overheated furnace.

Buffalo, N. Y.—The Church of St. Mary of Sorrows damaged.

Longview, Tex.—Rita theatre owned by Ftex Theaters, Inc., damaged.

Seminole, Tex.—Bunkhouse of Natl. Supply Co., heart of Fullerton oil field, destroyed.

Detroit, Mich.—Club Zephyr, Canton Township, destroyed.

Bellingham, Wash.—Bellingham Mfg. Co. destroyed.

Sheboygan, Wis.—Whse. of Sheboygan Iron & Steel Co. destroyed.

Flagstaff, Ariz.—Main sawmill, powerhouse and fuel house of Southwest Lumber Mills damaged.

Buford, Ga.—Two bldgs. of Mona Allen, Inc., a leathery tannery, destroyed.

Green Island, N. Y.—Main bldg. of Colonie Fiber Co. destroyed.

Elizabethton, Tenn.—Builders Supply Co. whse. destroyed.

Barnet, B. C.—Kapoor sawmill plt. destroyed.

Winnipeg, Man.—Downtown bldg. damaged.

Ontario, Cal.—Bookstore bldg. on Chaffey College and high school campus damaged.

Los Angeles, Cal.—Goodyear Latex Co. plt. damaged. Piece of hot rubber fell into gas heater.

Bradenton, Fla.—Angell's Electric Shop, Peter Pan Bakery, Bradenton laundry pickup station, Green's metal shop, paint shop, storeroom of Domino Citrus Assn. and second-hand furniture store of C. C. Hightower, and three buses of Henley Bros. Transit Co., destroyed.

Miami, Fla.—Whse. of Knight Bros. Paper Co. destroyed.

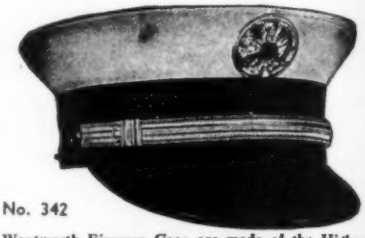
Portland, Ore.—Vacuum dredge, Willamette River, owned by city, destroyed.

Pascoag, R. I.—Griffith's block damaged. Star Theatre, Marion's restaurant damaged. Exploding oil burner.

Richmond, Cal.—California Milling Co. grain elevator.

Legal, Alta.—Roman Catholic Church, two stores and dwelling, destroyed.

WENTWORTH
FIREMAN'S UNIFORM CAPS
Union Made Prompt Delivery



No. 342

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available. They are made in all the New and Standard styles by the Best Skilled Union Craftsmen. Our 52 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

Write direct for latest circular and prices or see your local dealer.

No. 441

WENTWORTH-FORMAN CO., INC.
21-23 Edinboro St., Boston 11, Mass.
Manufacturers
Fireman Cap Specialists for Over 50 Years

HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO

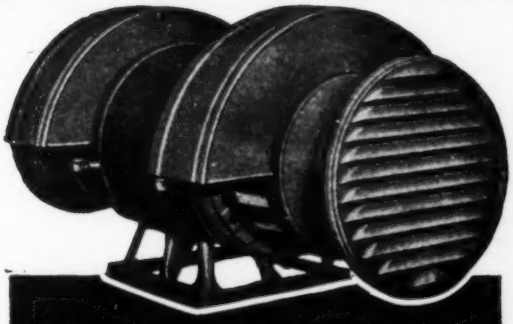
SOME WORDS FOOL YOU
like
RAISE (to erect) RAZE (to destroy)
BUT
WOOSTER BRASS always means the BEST in fire equipment supplies.

THE WOOSTER BRASS CO.
WOOSTER, OHIO

When you specify products bearing the TRUMPET trademark, you can SAVE and BANK on SAFETY.

Andover, Mass.—St. Francis Seraphio Seminary damaged.
Alexandria Bay, N. Y.—Playland, an amusement place, destroyed.
New Castle, Pa.—Kine Lumber Co. bldg. and stockpiles destroyed; also Mathews bldg., occupied by James Cafe and Rake Photographic Studio.
Oaks, Pa.—Mill of Peerless Paper Co., seven miles west of Norristown, damaged.
Fort Wayne, Ind.—Bldg. occupied by jewelry store of Harold Kerns; Clippinger Studios; United States Employment Service and Miami Cafe, destroyed.
Covington, Ky.—First Methodist Church damaged. Defective chimney.
Ottawa, Ont.—Three row dwelling destroyed.
Para Chatham, Ont.—St. Clair Grain & Seed Co. elevator destroyed.
Tuscaloosa, Ala.—Bldg. occupied by cafe, auto rental agency, auto repair shop, magazine agency, storehouse and cleaning establishment, damaged. Bldg. was being remodeled.
Indianapolis, Ind.—Advance Paint Co., destroyed. Explosion.
Lowell, Mass.—Imperior Court Apt. Bldg., damaged. Arson.
Holland, Mich.—Whse. of Bohn Aluminum & Brass Corp., adj. Plt. No. 11, destroyed.
Girardville, Pa.—Eight Bldgs., Schuylkill County block, included Girard Fire Co., hdqts., two taprooms, shoe store, barber shop and double private dwelling, destroyed.
Philadelphia, Pa.—Crawford Furriers, damaged. Also adj. Barrs Jewelers and Keiths Theatre, damaged.
Upper Darby, Pa.—Four greenhouses of James Shelley, destroyed.
Memphis, Tenn.—Bldg. of Fischer Lime & Cement Co. plt. destroyed.
Providence, R. I.—Business bldg. occupied by National Biscuit Co.; Calco Co., jewelry mfrs.; Eastern Nail Co. and owner, Warehouse Realty Co.
Nebraska City, Neb.—Main plt. of Western Brick & Supply Co., destroyed.
St. Hilaire, Que.—Business bldg. occupied by restaurant, bowling alley, pool room and barber shop, destroyed. Short circuit.
Urbana, Ark.—Urbana Lumber Co. sawmill damaged.
Mount Shasta, Cal.—Methodist Community Church destroyed.
San Mateo, Cal.—Peninsula Milling Co., lumber plt., destroyed.
Holland, Mich.—Bldg. occupied by Ottawa Motor Sales Co., damaged.
Marks, Miss.—Marks Hospital damaged.
St. Joseph, Mo.—Plymouth Clothing Co. damaged.
Whitefield, N. H.—Community Baptist Church destroyed.
Cape May, N. J.—Boliva, a fishing boat, 24 miles east of Cape Hatteras, destroyed.
Charlotte, N. C.—Bldg. occupied by Carey Transfer & Storage Co., Twin States Distributing Co. and Johns Manville Co., destroyed.
Portland, Ore.—Refineries Industries destroyed.
Yakima, Wash.—Yakima Milling Co. plt. destroyed.
Kingston, Ont.—St. Patrick's Roman Catholic Church destroyed.
Mimico, Ont.—Three connecting factories of Victoria Engineering Co., Exide Battery Co. and Klatte Furniture Bending Co., damaged.
North East, Pa.—Twenty-five room Hotel Concord bldg. destroyed.
Seattle Wash.—Bldg. occupied by Kimball Dept. Store, Putnam Jewelry Store and F. M. Evans real estate office, destroyed.
Woburn, Mass.—Plt. of Cloverleaf Bakery, Inc., destroyed.
Reading, Mich.—Plt. of Acme Chair Co. damaged.
Concord, N H.—West Congregational Church damaged.
Reading, Pa.—Plt. of Bowers Battery and Spark Plug Co. damaged.
Columbia, S. C.—New terminal of Delta Air Lines, destroyed.
Casco, Wis.—Barn on farm of Edward Bohman, one mile west, destroyed. Defective wiring.
Toronto, Ont.—Victoria Apt. Bldg. destroyed.
Citronelle, Ala.—Business bldg., downtown section, destroyed.
Minneapolis, Minn.—Hull Dobbs Ford garage destroyed.
Lincoln, Wash.—Main mill and boiler plt. of Lincoln Lumber Co. damaged.
Madison, Fla.—American Tobacco Corp. bldg. destroyed.
Milwaukee, Wis.—Calvary Presbyterian Church damaged. Arson.
San Francisco, Cal.—Fire nugget grill bldg., including stocks, liquors, destroyed.
Camden, Ind.—Vee-Dee Furniture Factory damaged. Sparks from exhaust fan igniting spraying fluid.
Westland, Ind.—Westland High School destroyed. Defective wiring.
Farmington, Mich.—Twins' Beauty Shop, Irene's Apparel Shop, 10 apts., two adj. bldgs. containing post office, hardware, pharmacy, damaged. Overheated furnace.
Gastonia, N. C.—Stanley elementary school destroyed. Defective flue.

DEPENDABLE



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GENERAL ALARM SIREN
You Can Depend On It ALWAYS

in Silver or in *SIRENS—*

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An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to install and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M."

ALSO . . . MANUFACTURERS OF A COMPLETE LINE OF APPARATUS SIRENS

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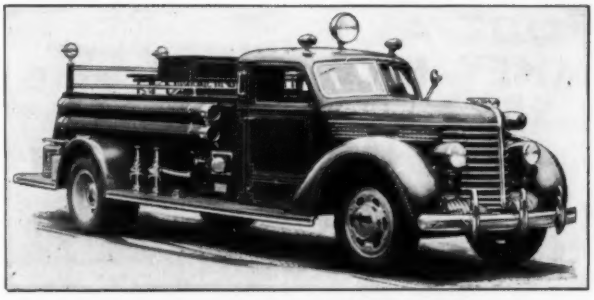
Champion Fire Apparatus



Champion Fire Pumps

NEW 24-PAGE BOOKLET IN COLORS

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W. S. DARLEY & CO., CHICAGO 12

SAVE VALUABLE PLANTS AND MATERIALS

Fyr-Fyter equipment has proven its value in preventing small fires from becoming disastrous through the loss of life and property. Recent catastrophic fires with terrific loss of life emphasize the urgent need of fire protection. A complete line of UNDERWRITERS LABORATORIES Labeled FIRE EXTINGUISHERS.

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Dept. 101-26, Dayton 1, Ohio

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CHIMNEY FIRE EXTINGUISHER

Save rushing to chimney fires over icy pavements . . . avoid slippery ladders and roofs by using IMP Chimney Fire Extinguisher. Just throw a 55c package "as is" on the hottest part of the fire in the stove, furnace or fireplace. The chimney fire will be out in jig-time without water or chemical damage. Recommended by fire chiefs, who always carry IMP in their cars for emergencies. Many volunteers carry it in their personal cars.

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Please send me ..... dozen packages of IMP. I will honor your bill f.o.b. Bridgeport.

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ADDRESS .....

CITY .....

STATE .....

FIRE EQUIPMENT DISTRIBUTORS ATTENTION
Add "IMP" Chimney Fire Extinguisher to your line. Write today for special distributor plan.

Crestline, Ohio—Crestline garment plt. leased by Printz-Biederman, destroyed.
Toledo, Ohio—Toledo Mirror & Glass Co. destroyed.
Paris, Ill.—Hemblin Motor Co. garage and adj. Equity Union Creamery Bldg. destroyed. Nearby Rex Apt. Bldg. damaged.
Milwaukee, Wis.—Highland Avenue Methodist Church damaged.
Chimacum, Wash.—Chimacum High School destroyed.
Lincoln, Wash.—Lincoln Lumber Co. destroyed.
Montville, Conn.—Business block occupied by State Drug Store and Three Bros. restaurant destroyed.
Chicago, Ill.—Country home of S. L. Brenner, Voltz Lake, north of Antioch, destroyed.
Georgetown, Mass.—Furniture factory of H. Sherwood Hardy destroyed.
Ramsey, N. J.—Lutheran Church of the Redeemer destroyed.
Wilson, N. Y.—Wehle Milling Co. plt. destroyed.
Waynesville, N. C.—Garrett Furniture Co. and adj. Burnett's cafe damaged.
Charlottesville, Va.—Lambert Genl. Store, Faber, Nelson County, damaged.
Tacoma, Wash.—Centennial Flouring Mill plt., northwest side of waterfront, destroyed.
Vancouver, B. C.—Four Royal Canadian Corvettes, downtown section, destroyed.
Glenwood, Ark.—Crawford Chevrolet Co. garage destroyed. Apt. bldg., Kelly-Davis Funeral Home and Sigmon tourist court damaged.
Worcester, Mass.—Eastern Bridge Co. destroyed.
Woodsville, N. H.—Johnson Lumber Co. destroyed.
Niles, Ohio—Republic Steel Co. plt. damaged.
Brooklyn, N. Y.—Lumber yard, adj. elevated structure and roofs of three nearby frame houses damaged.
Hensley, Ark.—Sturgis Lumber Mill, 20 miles out on Pine Bluff Rd., destroyed.
Havana, Ill.—Whse. of Illinois Power Co., two miles south, destroyed.
Grundy, Va.—Main bldg. of Grundy Hospital damaged.
Winnipeg, Man.—Bond & Ronald, Ltd., candy company, damaged.
Mankato, Minn.—Bldg. occupied by Krause Photo Studio and apt. of Roy Krause damaged.

Firemen Defended

Jack Butler, columnist on the Bridgeport, Conn., Herald, hit the nail on the head the other day when he went all the way for the fireman of today. In his column, "On the Labor Front," Jack had this to say:

"It might be a good idea for those people who criticize the 'lazy firemen who sit around the firehouse all day' to look at the newspapers.

"Practically every time you see a headline it tells about firefighters being seriously injured or overcome by smoke in a disastrous blaze.

"Any one can pick out the pleasant part of the other fellow's job, but the hard work and routine that goes with the bright side are never mentioned.

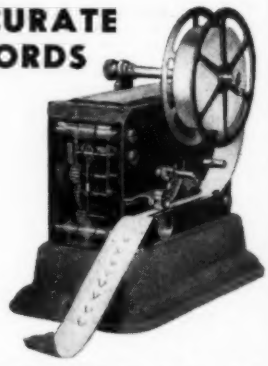
"Firemen earn every cent they get, and they're underpaid at that. Notice firemen's death certificates. In practically every case active and retired firemen die of occupational disease—heart trouble." T. F. MAGNER

Clamp for Handling Hose

Patent applications have been applied for by John E. High, of Grand Junction, Colo., on a clamp designed primarily for use in handling fire hose.

The inventor asserts that his clamp can readily be applied to regular fire hose and, when in position, will allow the hose to be conveyed either by hand or by hoisting rope to the point desired, where it may be so held by means of attachment on the clamp that when water is turned into the hose under pressure there will be no danger to the fireman by displacement of hose or nozzle.

FOR ACCURATE RECORDS



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FIRE ALARM

THIS punched tape register automatically makes records of the fire alarms or other emergency signals as transmitted over such circuits, in central fire alarm stations, outlying fire stations, police department offices, water works, etc.

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MOLINE . . . ILLINOIS

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FIRE HOSE DRYER

- Is easier to use
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- Reduces hose stretch
- Prevents mildew and rot
- Improves building design
- Air-conditions as it dries

THE CIRCUL-AIR CORPORATION
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YOU can use THE WORLD'S LOUDEST LOUDSPEAKER

Stories of citizens and fire fighters being trapped inside buildings are too frequent. Frenzied victims leap when help is at hand. A method of talking to victims and to personnel inside buildings can be the means of saving many lives.

VOCAL-AIRE is that method, a loudspeaker using a new basic principle wherein the **power** is derived from compressed air, the **sound** from a small amplifier. It is simple to install and maintain. New Haven F.D. has equipped its sound and light truck with VOCAL-AIRE and has had occasion to use it several times in the first few months of operation. Chief Heinz of New Haven reports he can be heard over the noise of traffic and operating equipment at all times, even when men are within large buildings. VOCAL-AIRE is available in several models, for use on A.C. lines, or self-contained for truck mounting or portable use. Installation and maintenance are simple. Can be used in coldest weather.

We shall be glad to send our literature on request and we are prepared to demonstrate the equipment under your own conditions. Write Dept. ——

DILKS, INC
NORWALK, CONN.

The Watch Desk

(*Continued from page* 103)

them assume any smoke is a 3-alarm fire unless proved otherwise." . . . In Cypress, Calif., thanks went forth to the Fire Department during the holidays when the brothers saved 3,000 turkeys in storage in a blaze which caused $40,000 damage in a meat locker warehouse. Wonder if any of the brothers got a wishbone? . . . An unknown Philadelphia clipster sends us the item about a Fire Department pumper that collided with a street car in West Philadelphia, as it was returning from a fifth false alarm run in the area in twenty-four hours. Four firemen were hurt—fifty passengers shaken up. . . . In Hammond, Ind., caretakers of a local firehouse set their bed on the fire truck while house-cleaning. When they wanted to turn in, they found the bed had gone to a fire—and hadn't come back (Thanks, I. J.). . . . We kinda like to get items like this: In Ottawa, Ont., Keith McMurtry was fined $5 and costs in county magistrate's court when found guilty of driving his automobile too close to the rear of a fire apparatus traveling to a fire. . . . In Trenton, N. J., a Navy veteran was burned to death when gasoline, with which he was scrubbing a grease pit, exploded and enveloped him in flames. . . . Then there's the yarn about Fire Chief Leroy Smith, of Matawan, N. J., who was summoned back hurriedly from his vacation at Niagara Falls. His house had burned down! . . . In Scranton, Pa., Joseph Goyer, 10, died from burns suffered in the explosion of a popcorn machine. Five other persons were injured by flaming gasoline which suddenly burst from the stand the boy was operating at a picnic. . . . So many Mountain Lake, Minn., residents enjoy a "good fire" that firemen protested to City Council that onlookers interfered with their work. Now sidewalk fire chiefs must remain at least one block from the scene of a fire.

New Heitowit Manuals

Morris Heitowit, 1050—44th Street, Brooklyn, N. Y., has issued two new loose-leaf manuals containing fundamental information about the New York Fire Department.

The first is a new edition of his original Heitowit's Manual, pocket-size, which contains the numerical data about every fire company in the city by battalion and division, with General Order 1 brought up-to-date.

The second manual is also loose-leaf and contains the latest alarm box locations and other useful information.

These texts will prove valuable to anyone interested in the statistical side of the New York Fire Department. They are sold in combination.

Jersey Firemen Meet

The mid-winter meeting of the North Jersey Firemen's Association was held at Dover, N. J., on January 8. Former Battalion James J. Deasy, of the New York Fire Department was the principal speaker, and he addressed the group on the subject of "Hotel Fires". He discussed causes, effects and the need for means for insuring early detection, as well as the importance of structural features and equipment to check the spread of fire.

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An Indispensable Fire-Fighting Tool

The Saw-Gun is an amazingly efficient Portable Power Saw that speedily cuts thru all metals, wood and other materials. Firemen equipped with this essential rescue tool can get at a fire or entrapped persons QUICKLY! Cuts rapidly thru heavy gauge steel. No need to waste precious time removing iron gratings, or other obstructions . . . cut them out of the way with the Saw-Gun! Saves time! Saves lives!

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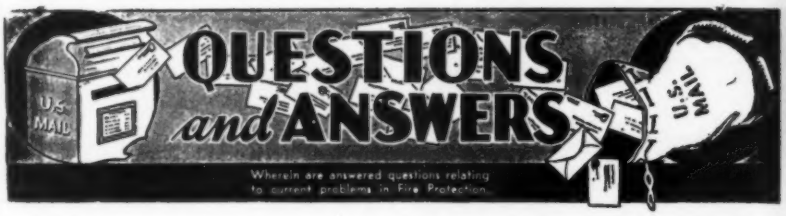


Fox Lock

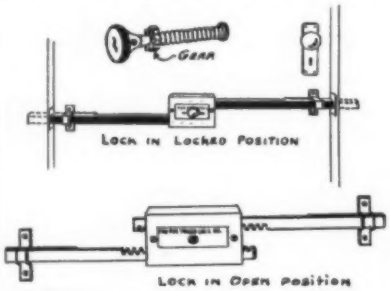
To the Editor:

I have read in fire service books of the difficulty experienced in opening Fox locks.

What is a Fox lock, and how does it differ from ordinary door locks found in loft buildings, etc.

J. C. C.

Answer: The accompanying sketch shows the details of a Fox lock. It consists essentially of two bolts, or bars,



FOX LOCK

which, when locked in position, penetrate 2½ inches into the casings or door jambs. The other ends of the bars terminate in the lock box. These latter ends are toothed, and a small gear, integral with the locking mechanism, moves the bars in opposite directions when the key is turned. The illustration gives further details of construction.

Solution of Combined Layouts

To the Editor:

Fires in fields and woods are common and they often occur at considerable distance from roads and hydrants. How far from hydrants can fire departments deliver water in effective (even though not in desired) quantities by means of hose? State the layout used.

Prove by use of formulas what discharge the layouts below will give.

1. An engine is pumping through two lines of 1,000-foot lines of 2½-inch hose siamesed into 500 feet of 2½-inch hose branched into two lines of 1½-inch hose equipped with ¾-inch tips. Engine pressure is 250 pounds.

2. Two 2,000-feet lines of 2½-inch hose siamesed into 2,000 feet of 2½-inch hose equipped with a 1⅛-inch tip. Engine pressure is 250 pounds.

3. Two 2500-foot lines of 2½-inch hose stretched to a 2½ x 1½ reducer and then into two lines of 1½-inch hose each 500 feet long and equipped with a ½-inch tip.

Which is the most practical of the three layouts and why?

My solution to the third layout is as follows:

$$\text{N. P.} = \text{E. P.} \div (1.1 + \text{KL})$$
$$= 120 \div (1.1 + .0115 \times 185)$$
$$= 37 \text{ pounds approximately.}$$

500 feet of 1½-inch hose divided by .074 = 6756 feet of 2½-inch hose.

Discharge is equal to

$$30 \times \text{D} \times \text{D} \times \sqrt{\text{P}}$$
$$= 30 \times .5 \times .5 \times 6.08 =$$
46 gallons per minute.

I would appreciate the discharge for layouts 1 and 2, and any other comments you may offer on the above.

E. S. K.

Answer: You ask how far from hydrants a fire department can deliver water in effective quantities by means of hose. Effective quantities must first be defined before any figures can be given.

However, if ½-inch nozzle is employed at 50 pounds nozzle pressure, a pumper operating at 250 pounds engine pressure should be able to deliver water through about 24,400 feet of 2½-inch hose.

A ½-inch nozzle at 50 pounds pressure discharges 52.2 gallons per minute. The friction loss per 100 feet of 2½-inch hose carrying 52.5 gallons per minute is .82 pounds per 100 feet.

With 50 pounds at the nozzle, we have 200 pounds left for overcoming friction loss.

200 ÷ .82 = 244, which is the number of hundreds of feet of hose in the line of 24,400 feet.

The solution to the third problem you submit is correct except that a variation of the standard formula should be employed rather than the standard formula for finding nozzle pressure.

It is: N. P. = E. P. ÷ (1 + KL)

In this formula you will note that 1 instead of 1.1 is used within the parenthesis. This is necessary where very small tips are used on 2½-inch hose.

In solving with this value of K we get nozzle pressure 120 ÷ (1 + .0115 × 185)

= 120 ÷ 3.1275 = 38 pounds nozzle pressure approximately.

By table the discharge from the ½-inch nozzle at 38 pounds pressure is 45.7 gallons per minute.

The solution to Problem 1 is as follows:

The two parallel 1,000-foot lines of 2½-inch hose combined are equivalent to 277.78 feet of 2½-inch hose, single line.

The two parallel 200-foot lines of 1½-inch hose combined are equal to 752.4 feet of 2½-inch hose.

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LIFE NETS
"the finest", have been instrumental in saving many hundreds of lives, without injury to the person rescued or to the men holding the net.
The many exclusive features of the ATLAS NET have been proven through performance. Insist on the newest improvement, Forged Steel Locking Hinges. ATLAS NETS are now available for prompt shipment and are the only modern, up-to-date nets, with dual action impact absorbers.
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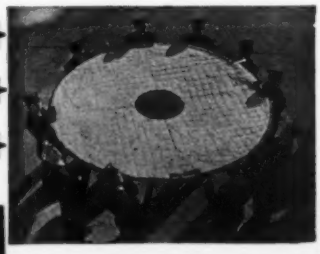

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JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and
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NOW AVAILABLE
We can now supply old type ¾ Length and Knee Length Felt-lined Firemen's Boots.
JANESVILLE APPAREL CO.
JANESVILLE, WIS.

Thus the entire layout is equivalent to a single stretch of 2½-inch hose 277.78 + 752.4 + 500 = 1530.18 feet.

The two ¾-inch tips are, when combined, equal to a 1⅛-inch nozzle.

K for 1⅛-inch nozzle on 2½-inch hose is .1273.

Then N. P. = E. P. ÷ (1.1 + KL)
= 250 ÷ (1.1 + .1273 × 30.6)
= 250 ÷ 4.99538
= 250 ÷ 5 (approximately)
= 50 pounds at the combined nozzles.

This is also the pressure at each of the two nozzles.

The solution to problem 2 is as follows:

Two parallel 2,000-foot stretches of 2½-inch hose when combined are equivalent to 555.56 feet of 2½-inch hose, single line.

Then the total stretch is equal to 555.56 + 2,000 or 2,555.56 feet of 2½-inch hose, single line.

K for 1⅛-inch nozzle on 2½-inch hose is .167

L = 2555.56 ÷ 50 = 51.1

Then N.P. = 250 ÷ (1.1 + .167 × 51.1)
= 250 ÷ 9.634
= 25.96, or 26 pounds

This latter presure is deficient for the production of a good fire stream.

Box 21 Associates—Dayton

To be added to the data on "box", "sparks" and "buffs" clubs and associations, published in the November, 1946 issue of FIRE ENGINEERING, is this information released from the Box 21 Associates, Inc., Dayton, Ohio.

According to its president, M. J. Steuer, 2321 Oak Park Ave., Dayton 9, Ohio, the Box 21 Associates was organized in 1935, chartered in the State of Ohio in 1945 and carries an active membership of 32. It owns, operates and maintains three complete life saving units consisting of boats, trailers, inhalators, drag hooks, outboard motors, etc. The members respond to all multiple alarm fires in Dayton and surrounding communities, rendering first aid when called upon for it. In addition to assisting in combating fires, they also participate in fire prevention and accident prevention programs. Members also furnish sandwiches, coffee or soft drinks to officers and firemen at incidents of major proportions.

Box 21 Associates derived its name from the original Box 21 which has had more multiple alarms than any other signal box in Dayton. The present Secretary is Cliff Jenkins and the treasurer is P. Greisheimer.

Madison Department Has Own Radio

The Madison, Wis., Fire Department is installing its own three-way F. M. radio system on a waveband separate from police. The system, installed under the regulations of the Federal Communications Commission, is said to be one of the first in which firemen operate three-way radio independently of local police or other radio wavelengths. It permits communications not only between station and mobile units in the field, but between mobile units and the headquarters station. It is understood that not only will the fire chiefs' cars be three-way-radio-equipped, but so will all mobile fire apparatus in the department.

NOW READY!

A new printing of the book that has helped so many ambitious firemen win promotion.

QUESTIONS
and
ANSWERS
for
LIEUTENANT
and
CAPTAIN

By GEORGE J. KUSS, former Deputy Chief N. Y. Fire Dept., and FRED SHEPPERD, Editorial Director of FIRE ENGINEERING.

Fire chiefs and civil service examiners the country over have found this book a simple, dependable solution of the problem of preparing firemanic promotional examinations. And that's one reason why it has been so helpful to firemen studying for promotion.

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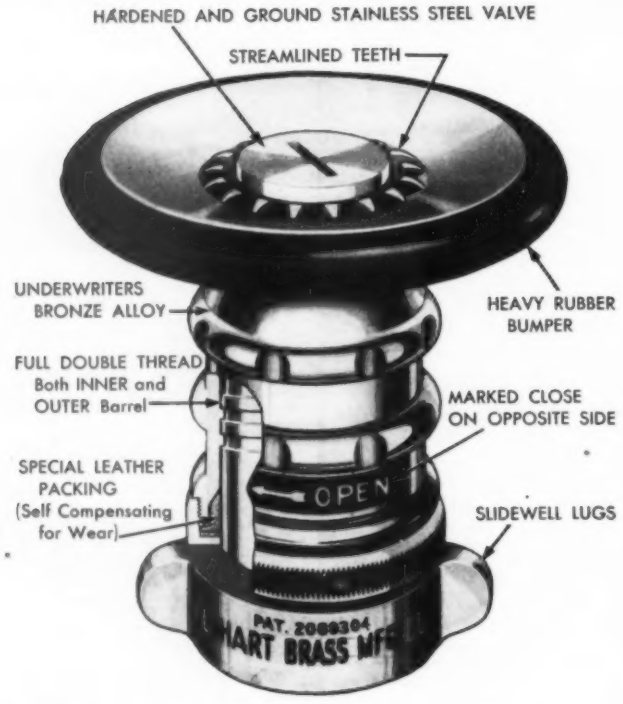
The ELKHART "MYSTERY"

America's Leading Fog Nozzle!



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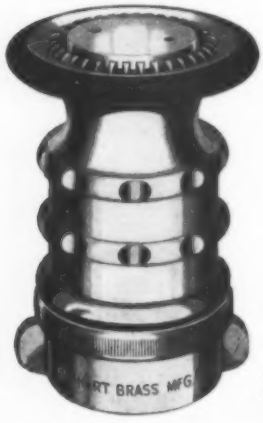
Most Fire Departments everywhere prefer the "Mystery" for perfect variable straight streams, for variable pattern of *Solid Fog* and complete shut-off—all instantaneous with only one movement. Elkhart's "Mystery" Fog Nozzle is first because it's best—proved so under fire. Write for details.



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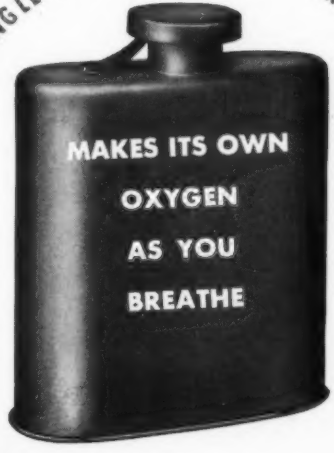

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FWD...

THE FIRE TRUCK THAT GETS THERE

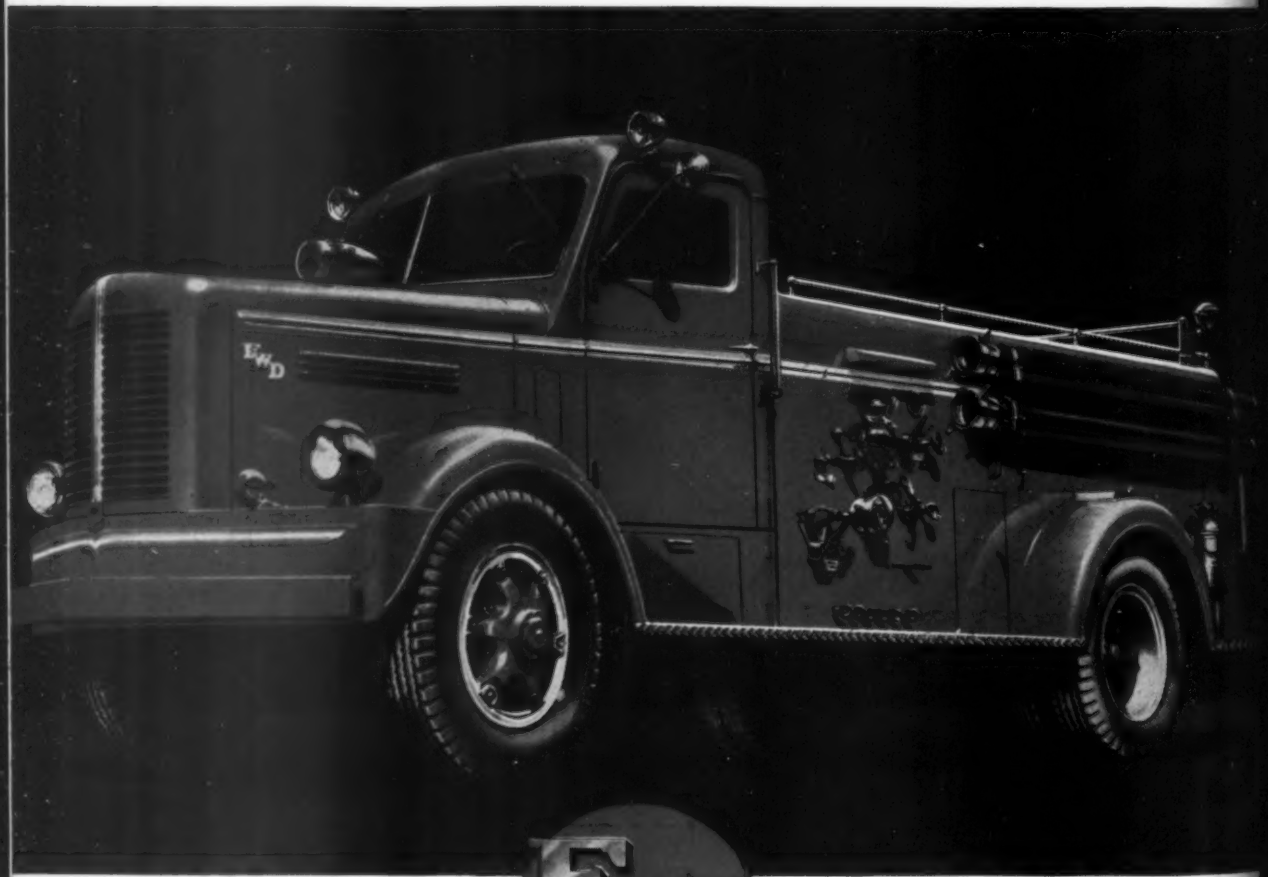
— *Faster*, Safer, Easier!

Depend on FWD four-wheel-drive apparatus to perform in full measure with all the factors that count in fire fighting — speed that gains precious minutes getting to the fire — power to climb the steepest grade without slackening pace — full four-wheel traction to get through snow or mud-blocked streets — sure-footed safety for fast travel on wet, slippery pavements.

The two driving axles of an FWD, delivering powered traction to front as well as rear wheels, are double assurance that it will bring men and equipment to the fire in less time and with safety — under all conditions of road and weather.

THE FOUR WHEEL DRIVE AUTO CO., Clintonville, Wisconsin

Canadian Factory: KITCHENER, ONTARIO



The new FWD Model F75T 750-gallon triple combination fire fighter . . . with open type body providing easy accessibility to all equipment and controls.

••America's Foremost Fire-Fighting Truck••